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Midterm Evaluation
Carter Center Incorporated
Global 2000 River Blindness Program

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Evaluation Team Leader	Roy E Brown, M D , M P H
Evaluation Team Member	Cristanna M Cook, PH D

EXECUTIVE SUMMARY

The evaluation process of the Onchocerciasis Programs by Roy Brown and Cristanna Cook began with attendance at the Sixth InterAmerican Conference on Onchocerciasis (IACO) in Oaxaca, Mexico, November, 1996 The conference afforded the evaluators the opportunity to become familiar with the various activities of the two aspects of the intervention with Ivermectin treatment for River Blindness, in 6 Latin American countries and in Nigeria In addition, there was the meeting of the major participants in the projects and holding discussions about what was being undertaken in the field, as well as gaining a background of the project's historical developments so as to better appreciate the on-going activities (Please refer to the initial report in the Appendices **"Comments on the Onchocerciasis Conference, Oaxaca, Mexico, November, 1996")**

The evaluators next went to Jos, Nigeria to review the Global 2000 River Blindness Program (GRBP) in 9 States of Nigeria where Ivermectin is being distributed both actively in local communities and passively in health centers, coordinated by different Non-Governmental Organizations (NGOs) under the guidance of the State Ministries of Health, within the guidelines established by the National Onchocerciasis Control Task Force Discussions were held with each of the persons on the Global 2000 RBP staff, documents were reviewed, field trips were undertaken to see personally sites where the Simulean vector black flies were breeding, and villages were visited where the Community-Based Distributors (CBDs) were providing oral Ivermectin (Please refer to the second report in the Appendices **"The Global 2000 River Blindness Program - GRBP - Report, January, 1997")**

Finally, in May, 1997 the team visited Guatemala City where the OEPA (Onchocerciasis Elimination Program in the Americas) Headquarters is located Interviews with all of the key staff members were conducted, documents were reviewed, and a field trip was taken to see Ivermectin distribution, nodulectomies and skin snipping for samples of the *Onchocerca volvulus* parasites, and the Geographic Information System for mapping data was visited at the Universidad del Valle Also, since a majority of the individuals with onchocerciasis in Guatemala work on coffee growing "fincas", we visited ANACAFE, the coffee growers association in Guatemala City and found a very positive relationship between the Director of Social Services of Anacafe and the Director of OEPA In addition, we found a strong relationship with OEPA's director and members of the Guatemalan Ministry of Health, both at the central level and in the field

Unfortunately, the evaluation team had no opportunity to visit the Carter Center in Atlanta, although we met all of the key individuals from Carter Center at the Oaxaca conference As will be noted in our findings and recommendations, there needs to be a strengthening of the communications and administrative relationships between the Carter Center and OEPA

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I INTRODUCTION AND BACKGROUND

On a worldwide basis, onchocerciasis affects approximately 17 million people and represents the 4th leading cause of blindness with both a social and economic impact For individual treatment there is an oral medication, ivermectin known also by the brand name of Mectizan, produced by a U S pharmaceutical company, Merck and Company For the past decade, Merck has generously offered to provide the medication without cost for as many individuals who require it and for as long as deemed needed

The parasite, *onchocerciasis volvulus* is one of a family of blood flukes called filariasis, and the disease is transmitted by the bite of a female black fly, *Simulean*, which serves as the insect vector in vast parts of the world When African slaves were brought to the Western Hemisphere, where the same family of fly already existed, the disease was introduced to certain parts of six specific countries in Latin America

After the female black fly bites an infected person and takes a blood meal, the parasites develop through several stages inside the fly vector, which when the next host person is bitten, the infected parasite can enter the body, mature into adult filariae, and start producing offspring known as microfilariae These wander around the body subcutaneously, often entering the central nervous system and parts of the eye, resulting in vision impairment, and ultimately in blindness Because the black fly larvae require oxygen, the flies are found in and near rapidly flowing streams and rivers, and hence the name "River Blindness" Ivermectin kills the wandering microfilariae, but does not destroy the parent macrofilariae that remain in nodules in the human host This fact makes it necessary for the control of the disease to administer the medication on an annual basis for periods up to 10-12 years, the lifespan of the adult macrofilariae

Organization and logistics are required to identify locations where Simulean flies transmit the disease and in all of those endemic locations to administer for a prolonged period of time ivermectin to populations at risk It should be noted that the locations where onchocerciasis is endemic are often isolated communities in places that at certain times of the year, mainly during the rainy seasons, are difficult or even impossible to reach It is also important to keep track of those individuals who must receive ivermectin annually, keep inventories of the numbers of tablets, and follow with periodic evaluations of the hopefully decreasing prevalence rates

The River Blindness Foundation (RBF) was organized in 1990 to assist with the distribution of ivermectin, starting with a small pilot program in 2 Nigerian States By 1991, after a discussion with the Federal Minister of Health, his staff, and with the Plateau State MOH, it was decided to launch a large, state-wide onchocerciasis control program With support from USAID RBF supported the NGO Africare to distribute ivermectin in Adama and Taraba States, and by 1993, in Borno State, all of which have

hyperendemic oncho associated with blinding A Federal Five Year Plan was developed with RBF assuming the leadership role in a coalition of NGOs that would work with Federal and State MOHs

Thus, USAID matching funds were designed to enable RBF to develop a nationwide oncho control strategy for Nigeria, based on State MOH in collaboration with NGOs in all 24 states where oncho is endemic The RBF personnel trained and supervised state and local health workers, and by 1993 similar oncho projects were initiated in 4 more Nigerian States, eg Abia, Delta, Edo, and Imo, employing the same strategy of using state and local health workers, providing training, supervision, and guidance from the RBF staff The NGOs included UNICEF, Africare, Sight-Savers (UK-based), Christoffel Blindenmission (Germany-based), International Eye Foundation, and later the Lions Club International, World Vision International, Child Association of Nigeria, Mitosath, and the International Foundation for Education and Self-Help

In 1992 RBF formed the Onchocerciasis Elimination Program in the Americas (OEPA) with the formal endorsement of PAHO OEPA has programs in 6 Latin American countries, including Brazil, Colombia, Ecuador, Guatemala, Mexico and Venezuela, each with affiliations with the Ministry of Health (MOH) in the respective countries It should be emphasized that the black fly vectors in the Western Hemisphere are not as effective in the transmission of onchocerciasis as those Simulean vectors found in Africa, and therefore there are fewer affected people in Latin America who are, for the most part, not as severely affected as are Africans with the disease According to the WHO Expert Committee on Onchocerciasis Report, a figure amounting to 99% of those who are blind from onchocerciasis live in tropical Africa

In April, 1996, RBF turned over all of its commitments and resources to Global 2000 of the Carter Center Incorporated in Atlanta (CCI) to continue the ivermectin treatment program for more than three million people in Nigeria and more than 100,000 in Latin America A USAID matching grant supports GRBP's administrative framework in Nigeria, and is a critical element to GRBP's ability to provide managerial and technical assistance, and to foster standardized reporting, training, and coalition building The GRBP support for Nigeria and Guatemala operations differ in that the first is a national program for the distribution of ivermectin in endemic locations in seven Nigerian States, and the other is a regional program to stimulate national programs in six Latin American countries The USAID resources help a unique coalition whose partners range from villagers and local oncho control teams to the MOHs of six countries, multilateral organizations, many NGOs, and multinational banks

The MOHs in Latin America do not place onchocerciasis very high on the list of health problems, but it must be emphasized that there exists the opportunity of elimination of the disease, a goal contemplated for the year 2007, or before in certain locations Ivermectin has the effect in humans of killing the microfilariae, or the offspring of the

larger adult worms who live in the human host for up to 10-12 years It is for this reason that the drug is considered necessary for administration for a period of 10-12 years, twice a year in Latin America and annually in Africa, in order to eliminate the disease This difference may represent a matter of logistics rather than ideal dosing, with many more at risk people to be covered in Africa

In addition to the oral treatment with ivermectin that is being carried out in both Latin America and in Africa, there are a number of other interventions that have been and some that still are being employed in some locations There is vector control, both chemical and biological, which has been in use in certain parts of Africa where there are large rivers under the Onchocerciasis Control Program (OCP) In the 11 countries where this very costly vertical, centrally-directed approach of dosing large rivers with chemicals, there has been found a significant reduction in the numbers of infected blind individuals There have also been used nodulectomies, health education, and socio-economic interventions to reduce the negative effects of onchocerciasis For example, in both Mexico and Guatemala, many years before the development of ivermectin for treatment of this disease, there was the identification of pockets of the disease, and treatment with removal of nodules that are associated with removal of large numbers of adult worms

There are major differences between the functions and structure of the Onchocerciasis treatment program in Nigeria and in Latin America These differences serve to clarify several of the problems experienced by the staff on the Onchocerciasis Elimination Program in the Americas (OEPA) and the differences should be appreciated in order to evaluate OEPA as distinct from the Nigerian program since certain constraints face the OEPA staff In addition, managerial activities on the part of the Carter Center represent constraints on the successful operation of OEPA (See below)

The program in Nigeria assumes the responsibility of distributing ivermectin for the control of onchocerciasis in nine States within a single country, namely Nigeria The project director, who is also the Head of the National Task Force on Oncho Control for the entire country, takes his authority directly from the National Minister of Health and has direct influence over the individuals who work for the State MOHs to carry out activities of the River Blindness Global 2000 Project At the local level, the Nigerian program is similar to OEPA in that reliance must be placed on help provided by local communities However, the Nigerian program is more involved in the recruitment and training of community based distributors (CBDs) and the local communities that have the responsi bility for selecting the health committees and CBDs GRBP is involved in promoting and selecting the local health committees

In the Americas, OEPA does not involve itself directly in the development of the oncho program structures in the 6 countries that exist to deliver ivermectin These structures, such as the Brigadistas in Guatemala, are under the direction of the MOH,

and are not under OEPA control In the Americas OEPA does not become directly involved in the delivery of ivermectin, whereas in Nigeria the program functions as an ivermectin delivery program, with collection of the medication at the port of entry, and distribution to each of the States MOHs from the headquarters at Jos

OEPA was started in 1992, with headquarters established in Antigua, Guatemala and with Mr Jeff Blanks as the Program Director The basic objective of OEPA was to support the various national programs in the six countries with the disease, and to reinforce all of the national components, including epidemiology, medical information systems (MIS), and health education Financial accounts were set up with transfer mechanisms The major challenge was the coordination of activities Not being a Non-Governmental Organization (NGO), OEPA is ineligible to apply for funding, but it can assist in channelling support PAHO was involved in the basic concept of OEPA, but it is in no position to develop funding strategies

Each of the six countries submitted a national plan of action, and funding mechanisms were established There have been training programs, as well as short-term consultants as requested To OEPA's credit, there have been several bilateral agreements signed between Brazil and Venezuela, between Ecuador and Colombia, and between Guatemala and Mexico which could well serve as a model for a similar approach in Africa OEPA has also provided a model for the development of a coordinated regional approach in Africa Additionally, if the disease could be eliminated in the Americas, there would follow a great political and psychological boost to the efforts in Africa OEPA also provides an example of a functional regional infrastructure, especially in the efforts of getting NGO groups working together to provide sustainability Also, if the ivermectin community-based distribution is proven effective, it could well be related to other efforts in primary health, with vaccine administration programs, malaria control, with treatment programs for other parasitic diseases such as Guinea Worm or schistosomiasis, and definitely with community health education

As mentioned, OEPA deals with the MOHs in six countries, not with the NGOs or with the academic community directly With bilateral meetings and agreements, there are various issues about migration of certain laboring populations across country borders, as well as concerns related to the transfer of drugs and jobs There are also major differences in financial support for each national program, with Brazil having $60 million and Venezuela having only $50,000 for their respective programs

OEPA represents the central source of information and training, data organization, and coordination of the ivermectin treatment and delivery This involves travel to the 6 involved countries and the collection of treatment data OEPA provides technical expertise and support for training to Guatemala, Mexico, Colombia, Ecuador, Venezuela and Brazil While the Nigerian program provides technical expertise and training, it also is concerned with distribution and tracking issues It must be kept in

mind that because Nigeria does not have to deal with other countries to fulfill its mission, the tasks and activities involved in the program are not under constraints of the whims and culturally diverse pressures of various MOHs in six different countries

In the Americas, in order to coordinate the activities of six different MOHs over which the Director of OEPA has no control, he must exhibit excellent diplomatic skills and somehow provide the incentives to maintain close ties so that data collected on the incidence and prevalence of the disease will be sent to OEPA The aim is to establish a standardized data collection routine for each country The promise of OEPA funds represents insufficient incentive to accomplish the close ties necessary to encourage cooperation

The OEPA director tells of trying to get cooperation from the Oncho staff in Mexico by offering financial support, and he was informed that they would not give anyone control of their program As the OEPA Director, Dr Alvarez emphasizes that to gain cooperation he must be diplomatic and move very slowly He is not in position to demand that Oncho program teams of the various MOHs do as he says Consequently, tact and personal ties can be as important as the promise of future funds to encourage participation in the plans of OEPA In addition, OEPA must contend with the problems of coordination with the Carter Center, which will be described in the relevant sections that follow

II METHODOLOGY

As stated above in the Executive Summary, the two evaluators were provided with a great deal of background information about the blindness-causing disease, onchocerciasis, about the various approaches to treatment and management of the condition, including the use of orally administered ivermectin to those affected and to those at risk in endemic areas, the use of vector control with chemically dosing rivers and streams as in OCP in Africa, the use of nodulectomies and health education

By attending the Sixth Annual IACO Conference in Oaxaca, the evaluators heard presentations describing the activities of various MOHs in the six Latin American countries, and about the important role of Merck and Company in the provision of ivermectin There was the opportunity to meet and speak directly with the many individuals who are active in the onchocerciasis control activities and programs in Latin America and Africa, and those working in the Carter Center, PAHO, the InterAmerican Development Bank, Merck and Company, and those on the Program Coordinating Committee with a great deal of knowledge and background in the field of onchocerciasis Many of these observations are covered in our initial report **"Comments on the Onchocerciasis Conference, Oaxaca, Mexico, November, 1996"**

The trip to Nigeria provided the evaluators with first hand contact with the Plateau State oncho program Presentations by each of the staff members of GRBP in Jos, as well as by Dr Miri who serves as both the Director of the National Onchocerciasis Control Task Force and as the GRBP program director Many documents were reviewed, field trips taken to see breeding sites of the Simulean vector, and the distribution villages with the CBDs giving out ivermectin under the supervision of the local and state oncho control team members Our observations are recorded in our report **"The Global 2000 River Blindness Program (GRBP) Report, January, 1997"** and there will follow additional specific recommendations in Section IV below

The evaluation team next went to Guatemala to visit OEPA and speak more extensively with the OEPA Director and his staff again, having met and made initial contacts in Oaxaca In-depth interviews with each of the key staff members were held, documents were reviewed, and a field trip was taken to see ivermectin distribution in one of the ANACAFE fincas, which also was a sentinel site so that nodulectomies were observed, as well as skin-snipping procedures for biopsy purposes in order to detect the parasite In the field we observed Simulean breeding sites located in a great many very small streams and brooks that are very different from the large rivers in Africa This makes vector control measures out of the question We also had the opportunity of visiting the University del Valle to see the mapping offices (MERTU/G) where GIS data are recorded in a very impressive and sophisticated operation We joined the OEPA

director, Dr Edmundo Alvarez, in visits to the Guatemalan MOH both at the Federal level and at the Provincial level, and we could appreciate the delicate political relationships so important for an effective program We visited Anacafe Headquarters, the National Coffee Association, and met the Director of Medical and Social Services, Dr Mario E Mazariegos, who also had a strongly positive interaction with Dr Alvarez

The only lacking element was the felt-need for the evaluation team to visit the Carter Center in Atlanta as was originally planned, since we both consider that CCI plays a centrally important role in both GRBP, Nigeria and in OEPA, Guatemala Although we had met each of the key individuals at the Oaxaca conference, there were certain important aspects that deserved further clarification Our comments on this will be included below in the recommendation Section IV

In summary, our methodology was very straightforward, including a review of a massive amount of reports and documents, extensive and detailed discussions with all of the important and key individuals who currently play or who have previously played significant roles in the various aspects of the onchocerciasis programs (See Appendix C), Nigerian and Guatemalan field trips to vector sites, ivermectin distribution sites, and skin biopsy locations, and to the various offices of the MOH involved In addition, the two evaluators held long and detailed exchanges both directly, by telephone, and through the mails, so that this final report represents a joint commentary and listing of our mutual recommendations

III FINDINGS AND CONCLUSIONS

PROGRESS TOWARD UNIFICATION OF THE NATIONAL PLANS INTO A REGIONAL STRATEGY

Efforts toward a regional strategy have been focused on the development of standardized data entry and reporting systems including GIS mapping and epidemiologic procedures Of course, the structure of OEPA includes representatives of each country and the annual IACO meetings provide a forum for the face-to-face solution of mutual problems

Use of Standard Reporting and Data Collection

A guide for the inventory of data, employing uniform variables was created by OEPA, and the objectives of this guide include

1 to stimulate the use of similar variable in each country for community inventories,

2 to have the opportunity to monitor the progress of the country programs as they move to a regional level of uniform reporting, and

3 to be able to use the regional data to monitor the changes in the epidemiologic classification of communities over the course of the project

The guide serves as a model for each country to emulate Each country can include its own individual specific variables as well The variables can be anthropologic, entomologic, socioeconomic, and epidemiologic The inclusion of specific variables in the guide came about as a result of meetings in 1995 in Brazilia, Brazil and Esmeraldas, Ecuador in 1997 A description of the variables is found in the **Appendix G** The variables are measured at the community level Individual or family data are maintained at the local level Thus, the level of regional aggregation is the community Latitude, longitude, and altitude data are collected for GIS mapping

It appears that each country has adopted, at least in principle, the community inventory data guide For example, Venezuela has produced a *Manual De Informacion Sistema Inventorio De Communidades De Oncocercosis* which is based directly on the guide The SICO computer program was designed in Visual Basic under Windows 95 which is a data system which allows the intake of relevant variables The data forms in Venezuela also capture the necessary variables However, each country appears to have its own set of data intake forms (the data intake systems of Mexico, Venezuela and Guatemala were observed or studied by the evaluation team) Standardization

does not include the use of the exactly identical forms, nor is it really necessary as long as each country gathers data on the same indicators

Progress in Data Standardization for Individual Countries

Brazil

Much of the effort in Brazil involves monitoring the disease among the Yanomami indigenous people Since these people are nomadic, data collection and treatment are carried out at the health posts where the Yanomami often frequent The Oncho program has been aided with a sixty million dollar grant from the World Bank for health programs for the Yanomami The Oncho program has a data collection system called DATASUS created by EPI-INFO It also has the capacity for GIS mapping with maps digitized at the Universidad del Valle mapping center in Guatemala (MERTU/G)

Colombia

Colombia's data system is created with EPI-INFO The number of active cases of Onchocerciasis is only 48, and this country can probably be certified free of disease very soon However, OEPA funds that support this program also support other health programs as well, since the same data system developed will be used to collect data on other health problems Colombia also has GIS capability

Ecuador

The data system in Ecuador is created in EXCELL However, it is now being changed to FOXPRO The program in Ecuador has an extensive amount of data Data are kept not only on the community level, but on river level as well Ecuador is the only country with complete GIS maps generated at Universidad del Valle

Guatemala

Associated with the recent decentralization efforts of the Guatemalan government, data collection efforts have been hampered The result of the decentralization process which started in 1994 left the Oncho workers without budgets or vehicles and thus affected ivermectin delivery as well as data collection Data for 1996 and 1997 are in hard copy form and have not been entered into the data system created in FOXPRO Staff changes in the MOH resulting from decentralization also hampered data

collection The data collection system is based on five data forms by which data are entered and stored at the local level Data are then passed up to the regional level (OEPA) through summary forms

Mexico

The Mexican Oncho program is the oldest in Latin America However, although data exist, Mexico is unwilling to provide these data to OEPA It has taken great diplomatic efforts to obtain any data from Mexico OEPA funded a short-term consultant to develop a data entry system called SIGGO The consultant developed a manual which clearly explained the data entry system, but the extent to which the system will be employed is not clear

Venezuela

Economic problems in Venezuela led to a collapse of the Oncho program in the 1980s There are data from 1962-1986 The program was revived in the 1990s The two institutes involved, Instituto de Biomedicina and Centro Amazonico Para Investigacion y Control de Enfermidades Tropicales, plan to rebuild their computer capacity for data entry A data entry program written in Visual Basic has been completed and is now being de-bugged They also have GIS capacity

A review of the 1995 reports, and of all of the plans of action for 1996 and 1997 indicates acceptable levels of effort in data collection and GIS mapping See the 1997 plan of Action for MIS and GIS in the **Appendix H**

Carter Center Support for Data

CCI was asked for funds to hire data entry staff, but this request was denied The LTC and the OEPA Director realized the importance of development of the best regional data system, and obviously the help with data entry would benefit this effort As a result, the high-cost of utilizing the LTC to enter data represented an abuse of a high priced resource, but this is what transpired in Guatemala

Use of Standardized Epidemiologic Procedures

The LTC in epidemiology has created a guide for epidemiologic evaluation of oncho in the Americas This is an overview of how to conduct epidemiologic evaluations More specific guides are available that document how to conduct the ophthalmologic and entomologic assessments, which are a part of epidemiologic assessment

The LTC's annual and semiannual reports show an acceptable level of effort toward the standardization of epidemiologic procedures (See **Appendix I** for reports)

A Comprehensive Geographic Mapping System

For the past two years, OEPA has contracted for services with the GIS mapping unit at the Universidad del Valle in Guatemala City (MERTU/G) The mapping unit, under the direction of Dr Robert E Klein from CDC is very sophisticated and very impressive, with an excellent staff and modern equipment The unit has produced project maps for Nigeria and Ecuador It also has produced maps for Sudan and Cameroon The problem we were told is that the mapping unit has used its resources and time to produce maps at a very high cost per map, calculated by IDB at $10,000 per map Consequently, the OEPA Director will not underwrite an annual retainer contract with the mapping unit, but rather have each country budget reflect a specific budget item for maps and pay for any maps requested Previous contracts were for $30,000 per year, with OEPA also providing $20,000 for new equipment It seems reasonable to have the new approach as a managerial system Naturally, the Mapping Center would prefer an annual contract so that the MERTU/G Director can develop a projected efficient utilization plan However, OEPA should not be expected to put itself in jeopardy with IDB in an effort to support the mapping center

The Mapping center has a talented staff and excellent equipment, and could operate as a profit-center offering its services to other agencies interested in having maps produced, as well as contracting with the University to teach this useful approach to data handling UNDO has contracted with the center for maps and there have been other maps produced for CDC Promotion of the mapping center as a profit-center should be encouraged with OEPA providing as much help as possible

The development of maps useful to OEPA in the tracking of country-specific onchocerciasis data has been hampered by a lack of incidence and prevalence data from each country Too many resources have been allocated to mapping, and not enough resources allocated to the development of necessary data to make maps useful for planning purposes, such as for ivermectin treatment projections The OEPA Director plans to allocate resources for data collection and data entry of basic

information on incidence and prevalence The recently departed LTC for MIS/GIS has spent a great deal of time at the mapping center, estimated to be over half of his weekly time, and it is planned that the new LTC in MIS/GIS should spend more time on basic data gathering and analysis and less on mapping Of course, the IDB grant does place parameters on what is expected and it appears that the extensive efforts placed on mapping resulted from the constraints imposed by the IDB grant

TRAINING OF AND DEVOLUTION TO INDIGENOUS REGIONAL HEALTH WORKERS

As mentioned above, OEPA is not a hands-on field program Indigenous health workers in each country already are responsible for the field activities OEPA is responsible for stimulating the national programs The targets for OEPA are those of the MOHs, national academic and research institutions , NGOs, and the PCC In 1996, about 200 people were trained by OEPA (See **Appendix J** for training activities carried out in 1996)

HEALTH EDUCATION AND TRAINING MATERIALS

Over the past two years, OEPA spent approximately $200,000 on a LTC for health education, and unfortunately, this consultant produced no health education materials of practical value for the project (See appendix for a document produced by this consultant, who was hired by RBF, not by CCI, prior to the arrival of the current OEPA Director)

As one reviews the document, titled "La Enfermedad de la Filaria en Guatemala" it is clear that the document is very wordy and not friendly to someone who is unable to read One wonders why the LTC refers to the black fly as "jen-jen" and writes about the mosquito as the vector of oncho According to a telephone conversation with Dr Frank Richards, this is an appropriate term, but comments by the Guatemalan OEPA staff written on the margins take issue with substituting a mosquito for a black fly Words used in the manuscript, which was never approved and therefore never produced, to represent the reproduction of adult worms are not the customary way to describe giving birth Finally, there is a passage describing dying after taking Mectizan, but it is unclear what or who is dying, the microfilaria or the person who takes the medicine and clearly this is problematic

Reviews of this health education pamphlet by Dr Edmundo Alvarez, Dr Guillermo Zea Flores, and Dr John Ehrenberg, definitely point out problems with the document, but these cannot be discused as they were presented to the evaluators as confidential

The LTC in health education was an anthropologist, not a health educator, and the LTC himself writes in his mid-term report dated August, 1996, that "health education can/should go beyond being a 'delivery' construct (and) should be interactive, participatory, and depart from cognitive models maintained by the people who constitute a given population and in reference to a particular disease cluster"

In fact, what was needed by OEPA for each of the six countries involved was some sort of specific health educational products that could be adopted by each country's MOH unit in health education In **Appendix K** there are examples of appropriate pamphlets and posters from both Colombia and Mexico, and OEPA is in the process of hiring a replacement LTC in Health Education to assist each country with the production of useful and appropriate health education materials For a few thousand dollars toward each country's health education efforts, OEPA is able to support the development of appropriate and useable materials The Colombian short-term consultants also produced an extensive justification with field testing of the materials developed

The original LTC in health education makes it clear in his mid-term report that he is a "Social Sciences and Health Education LTC" hired to carry out migration studies among the indigenous groups in the endemic areas The evaluation team did not see any output from this effort, and it was noted that his contract was not renewed, nor was his request supported to attend the IACO conference in November, 1996

THE NUMBER AND TYPE OF ORGANIZATIONS USING MATERIALS PRODUCED UNDER THE COOPERATIVE AGREEMENT AND THE UTILIZATION OF THESE MATERIALS

The following organizations use materials produced by OEPA

Fundacao Nacional Da Saude (Brazil)
Oswaldo Cruz Foundation (Brazil)
Instituto de Pesquisas da Amazonia (Brazil)
Religious Missions (Brazil)
MOHs (Six countries)
Health Unit of Cauca Department (Colombia)
National Institute of Health (Colombia)
University Nacional, University of Valle (Colombia)
Institute of Tropical Medicine (Colombia)
Hospital Voz Andes Quito Community Services (Ecuador)
State Health Services of Chiapas and Oaxaca (Mexico)
Institute of Biomedicine (Venezuela)
Amazon Center for the Investigation and Control of Tropical Diseases (Venezuela)
Central University (Venezuela)

The organizations fall into various categories, including educational, non-governmental non-profits, health units, and government agencies

In addition, the OEPA Director has been instrumental in gaining support of the Guatemalan coffee growers and the social services division of Anacafe Through his efforts, the coffee growers who own the fincas where much of the oncho exists, are most supportive of OEPA's efforts Without the support of Anacafe, even the distribution of ivermectin would not be possible The evaluation team went to Finca Santa Margarita to observe nodulectomies, skin snipping, and ivermectin distribution

IV RECOMMENDATIONS

A NIGERIA

1 There should be a resolution of the constraints related to the Port of Entry of IVERMECTIN, namely the Customs Officials at Lagos must be advised that they can not hold up delivery of this donated medication

It seems that UNICEF had stepped in 1996 and assumed diplomatic immunity for the permission of ivermectin to enter Nigeria, but it would be important not to have the drug held up for a long period of time while corrupt customs officials wait for a bribe Perhaps UNICEF will simply assume this responsibility in the future, but it is essential that delays do not occur since the annual distribution period runs close to the rainy season

2 There must be a uniform distribution system for each endemic State in Nigeria, so that the CBDs under the guidance of the local MOH distribute ivermectin to the communities at risk

In 1996 in the State of Taraba, Africare wanted to distribute the medication itself This was objected to by the MOH, with the resolution by Dr Miri who replaced Africare with UNICEF, who would assume responsibility for supervision of CBDs to distribute the medication

3 The Indian drug company that started to produce ivermectin tablets must be tracked down and stopped so that regular distribution continues without local interference

This is being pursued, along with stopping the stealing of tablets, which are then sold in the market place It is interesting that there is a marketing opportunity for the local sale of tablets of ivermectin that are available without cost in endemic areas It establishes the fact that there is a local demand for the ivermectin tablets

4 The importance of the program's sustainability must be directly addressed by GRBP, especially in those areas in Plateau State where they have reached 6th or 7th round of ivermectin distribution There may be a falling-off of interest with the decrease in prevalence rates that we observed

5 Robbery of ivermectin tablets, of other supplies and of program vehicles might be a recent problem, but efforts must be taken to involve the government agencies in assistance Jos GRBP lost 3 vehicles and this may represent a difficult problem, but one that must be addressed

6 It is strongly recommended that funding be allocated to advance the GRBP Management Training Center in Jos This may well include additional training for key staff in the United States or Great Britain

B OEPA

1 There appears to be a lack of program management interaction from the Carter Center

This seems to be a major problem and one that can be remedied fairly directly CCI must provide support for OEPA in the form of help with grant development, and fund raising since that capacity exists within CCI Alternatively, if this is unavailable, OEPA should be encouraged to seek outside funds on its own

OEPA is interested in actively seeking outside support from foundations and agencies which might provide more flexibility in their programmatic efforts The OEPA administrator indicated that he was told by CCI not to engage in fundraising since that was an activity to be coordinated by CCI In fairness to CCI, the Director of the Mapping Center held a different view and felt that OEPA should not wait for CCI direction and should support fundraising activities itself The question must be raised as to what extent OEPA can legally engage in fundraising separate and distinct from CCI

2 CCI should be encouraged to support data collection efforts of OEPA by allowing OEPA to hire support staff for data entry, and not have the new LTC in MIS/GIS to have to be responsible for this task

3 CCI must support realistic health education efforts of OEPA by immediately hiring someone qualified in the health education field to replace the LTC who left in 1996 This LTC could also have the additional knowledge in communications and perhaps also in social-marketing

There has been a great deal of lost time and resources in health education efforts that yielded very little in terms of actual realistic production The OEPA Director has several suitable candidates and he should be encouraged to move urgently on this matter in conjunction with the PCC human resources committee It is unclear why the anthropologist had to be maintained in the program for the duration of his 24 month contract, especially since he was not producing materials useful to OEPA

4 CCI should support the use of additional resources in the data collection efforts and fewer resources into GIS mapping until sufficient prevalence/incidence data exist to construct appropriate maps for use in project planning

As discussed above, OEPA has put too many resources in terms of time of the LTC in MIS/GIS and large amounts of retainer dollars for mapping and equipment The decision of the Director to have a budget line in each country's Plan of Action for future mapping requirements, and perhaps encouraging the Mapping Center to seek outside support from other agencies requiring its valuable services

5 CCI should clarify why resources have been held up and not allocated to assist OEPA

Apparently CCI did not consider the recent IDB audit their responsibility since the original grant was given to RBF, and this caused a lengthy delay in allocating resources Finally, CCI appreciated that it was indeed responsible for that audit

6 CCI should consider providing the OEPA Director with more authority in order to make more timely decisions Reasons for and against providing power of attorney to the OEPA Director should be discussed

The OEPA Director wishes to have additional authority since he works with important and powerful leaders in each country He feels that the additional authority will permit OEPA to function more smoothly as he would then be the legal representative for CCI and could make decisions in a more timely and appropriate fashion

7 CCI should communicate with the OEPA administration on how USAID funds are being allocated, as this appears to be unclear

The staff in Guatemala have no idea how funds are being disbursed The administrator indicated that he charges against the USAID matching grant 30% of certain overhead costs and salaries However, there is a dearth of communication between Atlanta and Guatemala City concerning the actual financial management of the USAID grant It appears that CCI has not made disbursements from this grant and the reason for holding these funds remains a mystery

At the IACO meeting in Oaxaca the answer to this question was that CCI wanted a better view of how funds should be spent and wanted to wait for this current evaluation However, the financial needs of OEPA are quite clear and there seems to be no valid explanation for not using these funds For example, funds could be used to support the immediate hiring of a legitimate replacement LTC in health education, a major need of the program

8 There is very little contact on a day to day basis between Atlanta and Guatemala City, ie between CCI and OEPA For example, there was a recent parasite conference in Japan to which OEPA was not invited to present materials on onchocerciasis in the region, and there is a WHO committee meeting in Geneva to discuss the terms of reference for declaring the elimination of onchocerciasis in Latin America and once again OEPA was not involved CCI should reasonably be involved in the promotion of OEPA's efforts The reasons for this gap is not at all clear

9 The evaluation team feels strongly that the OEPA should continue to be supported with USAID funding OEPA is providing effective technical support in the areas of epidemiology and MIS/GIS to six Latin American countries where oncho is endemic The 1997 Plan of Action (See Appendix) is extensive, but appropriate to their purpose

We recommend that funding for OEPA be maintained The OEPA staff and program should not be penalized for the inefficiency resulting in a lack of support from CCI It is felt that CCI should be placed on "probation" and someone with good management skills should assume the role of coordination of the OEPA program

V ACRONYMS

National Association for Coffee Growers	ANACAFE
African Program for Onchocerciasis Control	APOC
Community Based Distributors	CBDs
Carter Center Incorporated	CCI
Centers for Disease Control and Prevention	CDC
Geographic Information System	GIS
Global 2000 River Blindness Program	GRBP
Health Management Information System	MIS
IntrerAmerican Conference on Onchocerciasis	IACO
InterAmerican Development Bank	IDB
Ivermectin Distribution Program	IDP
Knowledge Attitudes and Practices	KAP
Medical Entomology Research and Training Unit/ Guatemala	MERTU/G
Ministry of Health	MOH
Long Term Consultant	LTC
Non-Governmental Organizations	NGOs
National Onchocerciasis Control Program	NOCP
National Onchocerciasis Elimination Program	NOEP
National Onchocerciasis Task Force	NOTF
Onchocerciasis Control Program	OCP
Onchocerciasis	Oncho
Onchocerciasis Elimination Program of the Americas	OEPA
Pan American Health Organization	PAHO
Program Coordinating Committee (of OEPA)	PCC
Private Voluntary Organization	PVO
River Blindness Foundation	RBF
Rapid Epidemiological Assessment	REA
Rapid Epidemiological Mapping of Onchocerciasis	REMO
Scope of Work	SOW
United Nations Children Defense Fund	UNICEF
United States Agency for International Development	USAID
World Health Organization	WHO

VI APPENDICES

A SOW of Evaluation

Nigeria

1 any training, workshops, or conferences in oncho control or ivermectin distribution, financial management, information systems (including GIS), supervision which RBF/GRBP hosted,

2 health education and training materials developed by RBF/GRBP to be given to organizations for content, appropriateness, and usefulness, including but not limited to Field Manuals, Procedure Manuals, and Experience Documents, and the number and types of organizations requesting materials produced under the cooperative agreement and utilization by the organization of these materials

3 technical support - document and assess the technical support provided by RBF/GRBP in the following areas management, assessment treatment, planning, monitoring and evaluation Include the number of contacts the types of organizations requesting and receiving support and the type of support given

4 capacity building - document the number of partners and the extent to which these partners have identified other support to enhance or sustain the program after USAID funding is finished, and

5 the degree to which national plans have been supported and standardized and the extent to which the primary national reporting systems have been strengthened by the program, as well as partners' (collaborating NGOs) abilities to document and track onchocerciasis activities using the standardized indices implemented by GRBP

Guatemala

1 the progress toward unification of the six national plans into a regional strategy,

2 three successful IACO meetings (1994-1996) leading to further cohesiveness

of the regional strategy,

3 the use of standardized epidemiological procedures and reporting in all six countries,

4 a comprehensive geographic mapping system of all endemic regions,

5 the training and devolution of indigenous health workers in the region,

6 the establishment of operational field research network involving both host governments and PVOs which can be applied to this and other tropical diseases,

7 health education and training materials developed by RBF for content, appropriateness, and usefulness, including but not limited to field manuals, procedure manuals, and experience documents,

8 the number and types of organizations requesting materials produced under the cooperative agreement and the utilization by the organization of these materials, and

9 the degree to which IDPs in all six countries promote primary health care activity in the treated communities

APPENDIX B

B Evaluation Team Itinerary

a Attendance at **IACO** in Oaxaca, Mexico - November 18-21, 1996

b Visit to **GRBP** in Jos, Nigeria - January 24- February 3, 1997

c Visit to **OEPA**, Guatemala City - May 11 - 18, 1997

APPENDIX C

C INDIVIDUALS CONTACTED DURING THE EVALUATION

Oaxaca, Mexico during IACO conference

Dr Augusto Corredor Arjona	Director of Colombian committee
Dr Joao Batista Furtado Vieira	Brazilian program
Dr Ronald Guderian	Ecuador program
Dra Tamara Mancero	Ecuador program
Dr Edmundo Alvarez	Director of OEPA
Dr Guillermo Zea Flores	OEPA Expert Advisor
Sr Fred Westcott	OEPA administrator
Dr John Ehrenberg Enriquez	LTC Epidemiology, OEPA
Ing Fred Clark	LTC MIS/GIS, OEPA
Dr Rudolfo Zea Flores	MOH, Guatemala Oncho Program
Dr Jose de Jesus Romero Angeles	Mexico
Dr Rafael Borges	Venezuela
Dr Richard Collins	PCC Chairman
Dr Frank Richards, Jr	CCI/CDC Oncho Expert
Mr Jack Blanks	formerly RBF, now with Project Hope
Mr Andrew Agle	CCI-Global 2000
Mr Richard Robinson	CCI, Global 2000
Ms Pamela Witchet	CCI
Ms Joni Lawqrence	CCI
Dr Philippe Gaxotte	Merck, Saint Cloud, France
Mr Moses Katabarwa	Ugandan oncho program
Dr Fabio Zicker	PAHO
Dr Stephen Corber	PAHO

Jos, Nigeria - GRBP

Dr Emmanuel Miri	National GRBP Director
Dr Victor Oluyemi	Assistant National Director
Dr Kenneth Korve	Technical Coordinator
Dr Abel Eigege	Training Officer
Ms Ifeoma Umolu	Training Officer
Mr Kehinde Oyenekan	Office Manager
Mr Peter Ndochi	Finance Officer

Mr Chuwang Gwomkudu	Scientific Officer
Mrs Keyi Fadipe	Financial Director (Lagos Office)
Mr John Imaru	Plateau State MOH Project Officer
Mr Sani Jugu	MOH State Oncho Control Team
Mr Iliya Haruna	MOH State Oncho Control Team

Guatemala City, Guatemala - OEPA

Dr Edmundo Alvarez	OEPA Director
Mr Fred Westcott	OEPA Administrator
Dr Guillermo Zea Flores	Expert Advisor, OEPA
Dr John Ehrenberg	LTC Epidemiology
Ing Fred L Clark	LTC MIS/GIS
Dr Robert E Klein	MERTU/G Director
Ing Sergoi G Garcia	Jefe del Centro de Computo
Dr Mario Marzariegos	ANACAFE Dir Social Services
Dra Amelia Flores Gonzalez	Directora Servicos de Salud
Dr Rudolfo Zea Flores	MOH, Oncho Epidemiologist
Dr Edgar Orlando Oliva	International Eye Foundation
Prof Onofre Ochoa	Entomologist
Dr Julio Issak	MOH, Jefe de Area, Atitlan
Dr Nestor Carillo	MOH Epidemiologist, Atitlan

APPENDIX D

APPENDIX D References

MATERIAL REVIEWED

1. Cooperative Agreement No. FAO-0158-A-00-4067-00
2 PVO Annual Reporting Guidlines - USAID
3 Global River Blindness Project Annual Report to USAID, 1996
4 OEPA July-December 1996 Semi-Annual Report presented to IBD
5. OEPA situational analysis presented in Guatemala City, May 1997
6. Country summary information and tables for annual treatments
7 Annual and Semi-Annual Report of Epidemiology Long-Term Consultant, 1995-1996
8. Guia Evaluaciones Epidemiologicas De La Onchcercosis En America
9. Informe de Visita a al Vereda Naiciona, Agosto de 1996, (Columbia)
10. Eliminemos al Oncocercosis, Secretaria de Salud, Mexico
11 Health education materials produced by Mexico for other tropical diseases
12. La Enfermedad De La Filiaria En Guatemala and critique by OEPA staff
13. 1997 Plan of Action, Health Manangement of Information Systems and Health Geographic Informations Systems Components
14 First semester report, 1996 (MIS/GIS component)
15. Second semester report, 1996 (MIS/GIS component)
16. 1996 Plan of Action end of year report, Health Management of Information Systems and Geographic Information Systems Components
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20. Guia de Utilization del Inventariao de Comunidades
21. Manual de Informacion, Sistema Inventario de Comunidades De Onchcerosis, Venezuela 1996
22. Sistema de Informacion General and Geografica del Programa de Eliminacion de la Oncocercosis de Mexico (SIGGO)
23 Plan Nacional Para la Eliminacion de la Oncocercosis en Guatemala, 1996
24. Normas Aplicativas Para Oncocercosis, 1997
25. Programa de Eliminacion de la Oncocercosis, 1997
26 GRBP Assessment Forms
27 GRBP Mectizan Treatment Form and Register
28 GRBP Oncho Data Software Design Charts
29 GRBP Monthly Reports and Semiannual Reports
30 GRBP Training Summaries
31 GRBP Workshop Reports
32 GRBP Organizational Structure Diagrams
33. GRBP Pocket Treatment Guide (for reactions)
34 Reports of the NOTF (National Oncho Task Force)
35 Draft - Annual Report USAID Cooperative Agreement No FAO-0158-A-00 January 1, 1996 - December 31, 1996
36 APOC (African Programme for Oncho Control) 1996 Proposals
37 Basic Health Education Tapes & Books for GRBP (+ Video Clips)
38 Article by Hopkins & Richards Visionary Campaign Eliminating River Blindness, Medical and Health Annual, 1997

APPENDIX E

APPENDIX E.

COMMENTS on the ONCHOCERCIASIS CONFERENCE, OAXACA,MEXICO

November, 1996

Roy E Brown, M D , M.P H.

Cristanna M Cook, Ph D

Comments on the Onchocerciasis Conference, Oaxaca, Mexico, November, 1996

Attendance at the Onchocerciasis Control Conference was very worthwhile in that it provided an oportunity to get to know some of the active participants, see a training session firsthand and attend a Program Coordinating Committee meeting

Some of the individuals I spoke with include

Dr Augusto Corredor Arjona - Director of the Colombian committee
Dr Joao Batista Furtado Vieira - Brazilian group
*Dr Ronald Guderian - part of the Ecuadorian program
Dra Tamara Mancero - from Ecuador
*Dr Edmundo Alvarez - Director of the Program, Guatemala
*Dr Guillermo Zea Flores - Guatemala
*Sr Fred Westcott - Guatemala
*Dr John Ehrenberg Enriquez - Guatemala
*Ing Fred Clark - Guatemala
Dr Rudolfo Zea Flores - Guatemala
Dr Jose de Jesus Romero Angeles - Mexico
Dr Rafael Borges - Venezuela
*Dr Richard Collins - Chairman of the PCC
*Dr Frank Richards, Jr - Carter Center (CDC)
*Mr Jack Blanks - formerly with the RBF, now with Project Hope
*Mr Andrew Agle - Carter Center - Global 2000
Mr Richard Robinson
*Ms Pamela Witchet - Carter Center
*Ms Joni Lawrence - Carter Center
Dr Philippe Gaxotte - Merck, Saint Cloud, France
*Mr Moses Katabarwa - Ugandan program
Dr Fabio Zicker - PAHO
Dr Stephen Corber - Paho

Those listed above with whom in-depth discussions were held are denoted by (*) I met and spoke with Dr Collins on the flights down, and met and spoke with Dr Frank Richards in the Mexico City Airport on the way down During many of these discussions Dr Cristania Cook was also present but there were certain times when we split-up and Cristanna was with someone else In addition there were many materials that were reviewed that related either to the disease and vector or to the various programs in the Western Hemisphere and in Africa Finally, it was essential for us to gather a feeling for the historical developments of the various interventional approaches employed in dealing with either onchocerciasis, the disease in man and to the vector system

IVERMECTIN

For nearly the past decade, Ivermectin has been offered by Merck for as many people and for as long as needed, without cost for the individuals or governments The River Blindness Foundation in Texas was organized to assist with the drug distribution, and there was formed the Onchocerciasis Elimination Program in the Americas (OEPA) with the formal support of PAHO OEPA has programs functioning in 6 Latin American countries, including Mexico, Guatemala, Colombia, Venezuela, Ecuador, and Brazil, each with affiliations with the Ministry of Health in the respective countries It should be noted that there is not as effective vectors (Black flies) in the Western Hemisphere as exist in Africa, and therefore there are many fewer people affected in these locations In addition, the people with onchocerciasis in Latin America for the most part are not as severely affected, that is there are many fewer individuals who have suffered blindness as a result The various Ministries of Health in Latin America do not place onchocerciasis very high on their list of health problems and finally, there is definitely an opportunity to eliminate the disease in the Western Hemisphere The contemplated date for this goal is 2007, or before in certain locations

Research is continuing into the effects of Ivermectin, but in addition to killing the microfilariae in the human host, and therefore reducing most of the vision morbidity, the drug has certain other effects on the adult worms both female and males It is for this reason that the drug is thought to be necessary for administration over a period of 10-12 years, on a twice annual basis in the Western Hemisphere, and on an annual basis in Africa It seems to me that this difference is a matter of logistics, rather than seeking the ideal for dosing That is to say there are just too many people to be given the drug in Africa, and so once annually is being attempted since every 6 months would be not possible According to the Merck figures, over 9 million doses were distributed last year and 18 million is anticipated for this year Merck writes off $3 00 US for each dose, so that it is very laudable, but not completely philanthropic The other interesting aspect of Ivermectin is that it has certain effects on other parasites, namely roundworms (Ascaris) are also killed, but not hookworms

VERTICAL VS HORIZONTAL PROGRAM

Recently, the intervention prohibiting the use of Ivermectin in pregnant women has been officially removed in the first trimester and the age range has been lowered to include those children above 2 years, thereby facilitating distribution Each of the persons spoken with describe the Ivermectin distribution program in Latin America as a horizontal program, but rather than indicating a relationship with other primary health programs, they mean to indicate that it being employed by the various Ministries of Health as a community-based program, at the grassroots rather than imposed from above For me a vertical program is one that deals with a single disease entity such as onchocerciasis, rather than a broad group of programs such as included under Child Survival In fact, I see no reason why there could not be linkage with other primary health approaches included along with the distribution of Ivermectin, since the logistics of gathering

communities together for one purpose can very well be connected with other health interventions In fact, for sustainability alone, this inclusion of other primary health programs would support these efforts In other words, were there efforts directed at oral rehydration, promotion of breastfeeding, growth monitoring, immunizations, or even vitamin A distribution, the entire onchocerciasis program would have a better chance of being sustained Ivermectin has been found to be relatively safe, free of major side effects, and will now be manufactured in 3 mgm bulk tablets rather than the previously made 6 mgm tablets there were individually foil-wrapped Note that the shelf-life was formerly 2 years, and will be less for the bulk pills in bottles

TREATMENT OF ONCHOCERCIASIS,

It is estimated that in 34 countries of the world, endemic onchocerciasis affects 17 million people, and it is the 4th leading cause of blindness, thereby exerting a social and economic impact Currently, the two approaches to deal with this disease include treatment with Ivermectin and vector control with various larvacidal chemicals I do not know whether any thought has been given (a) to the use of Ivermectin within a fortification process, or (b) whether the combination of Ivermectin and other medications for treatment of other tropical diseases, and as mentioned above, (c) the linkage with other primary health programs should be given additional attention Also, in this regard, I do not believe that any record is kept either by the various programs or by the individuals receiving Ivermectin, and therefore I cannot see how people are kept track of as having received a dose, and in need of subsequent doses

PRE-CONFERENCE COURSE

There was a pre-conference course for local individuals involved in the Mexican onchocerciasis program that included-

1) epidemiologic indicators for the onchocerciasis data base- Dr John Ehrenberg
2) entomology aspects of the vector - Dr R Collins
3) treatment and secondary effects of Ivermectin - Dr Guilermo Zea Flores
4) community management and control of data quality - Dr Frank Richards

The course was for a small group, but the participants were not of the same profession or background I appreciated the fact that it was a small group and conducted on an informal basis I believe that there was an excellent exchange of information, with many opportunities to share views and gather information I have no idea whether this was a typical or an exceptional course but it was very effective

IACO (INTERAMERICAN CONFERENCE ON ONCHOCERCIASIS

The IACO conference has been an annual affair for the past 6 years, and there are two meetings of the Program Coordinating Committee (PCC), one of which takes place during the IACO meeting The general objectives of IACO include the reduction of morbidity, prevent blindness

and other sequellae, and finally to interrupt the transmissoin of onchocerciasis by the year 2000 The final goal is to prevent any new cases in the preschool population by the year 2007 (after 15 years of the program) The community-based distribution of Ivermectin in combination with possible treatment of the macrofilaria, will interrrput the transmission in selected locations by 2012 (after 20 years) The aim is the elimination of morbidity of onchocerciasis

REPORTING SYSTEM

There is needed a uniform reporting system, and OEPA needs to develop an adequate reporting system to report the data, and a uniform system of criteria and epidemiologic indicators to arrive at a system of surveillance for the region The necessary strategic steps include

1) inventory of the communities
2) stratification of the communities
3) evaluation of rapid epidemiologic surveys
4) appropriate treatment
5) evaluation of the treatment program impact on the sentinel communities

The impact can be determined by counting the individuals with nodules, and then, by means of nodulectomies, evaluate the worm population, in conjunction with an evaluation of the vector population

THE VECTOR

Dr Collins indicated that onchocerciasis is only acquired by a bite from an infected black fly It should be noted that there are different Simulean flies in various locations and the vectors differ in efficiency of transmission of the disease, including how far they can fly how many bites they manage daily, how dense is the vector population, and how many infected individuals are available to provide the fly with the infection In addition, the infected human population can be migratory, moving with various seasons to do various activities such as coffee or sugar cane crop work or mining Seasons and locations determine how the vector is doing as well, and there is often an increase in biting densities with the dry season

After Ivermectin treatment, the infectivity of the Simulean goes down for about 4 months following the treatment as determined by infection rate per 1000 flies 16 months following treatment, the infectivity rate can rise, but after 5 rounds of biannual treatment the transmission is found to be blocked without greater advantage provided with 12 rounds of treatment The theory is that with treatment there will be fewer persons harboring microfilariae, and therrefore the vector bites will therefore transmit fewer cases of onchocerciasis

RISK FACTORS

It was generally agreed that if the Western Hemisphere region can accomplish its goal of elimination of morbidity , then this can be held up to the program in Africa The onchocerciasis program in Mexico has been in effect since the 1930's, and in Guatemala for nearly the same duration of time, but it is only with the advent of Ivermectin that symptom elimination became feasible In 1995 the River Blindness Foundation (RBF) in Texas, transferred its programs and resources to the Carter Center in Atlanta Those communities are considered "At Risk" with over 40% prevalence and they were included in the community mass treatment programs Those communities with over 60% prevalence are considered "High Risk"

The numbers of individuals at-risk for onchocerciasis in Latin America is a relatively small number from 50 or so people in Colombia in 1 at-risk village, to nearly 900,000 individuals in Venezuela and 3446 at-risk villages However, the numbers in Africa are much latrger and dwarf the OEPA program targets For example, in Nigeria the approximate numbers of individuals receiving Ivermectin in the treatment program has risen from 2 2 million in 1994, to over 4 million in 1995, to 8 million in 1996, and is projected to reach 30 million annuallly by 1999 and beyond

According to WHO, high risk prevalence is greater than 60%, but how does one determine percentage with onchocerciasis by positive skin snips, by the presence of nodules, or by vector analysis? Fred Clark was very thorough in reviewing the information system, starting with a census of the population, and going beyond that to various risk factors He reviewed the interrelationships among the various data, combining and collapsing data, from local villages to cities, states, countries, and arriving at summary data Mr Clark emphasized the need to standardize the data, aiming at simplicity, with verification as an ongoing process, including incorporation of newborns emigration, out-migration, and deaths

INTERVENTIONS

As presented by Dr Guillermo Zea Flores, the intervention program for onchocerciasis includes not only chemotherapy with Ivermectin (also known as Mectizan) or other agents, but also vector control both chemical and biological, nodulectomy health education, and socio-economic changes It is interesting to learn that there are very few reactions following the first dose of Ivermectin, characterized by some itching perhaps facial swelling, and occasional mild dizziness after 3-7 days For the most part the Ivermectin is well tolerated, and following the first dose when those with symtoms can be managed with antihistamines by mouth there are extremely uncommon reactions thereafter Kidney and liver function studies were found to be normal

OEPA (Onchocerciasis Elimination Program in the Americas)

For example, long before Ivermectin was developed and offered by the Merck Company, there had been longstanding programs in Mexico and Guatemala, identifying the disease pockets and treating the nodules that are associated with the adult worms In Africa, with large support from the World Bank and others, over $300 million were invested in vector control programs, independent of the various governments and their Ministries of Health

OEPA was started in 1993, with headquarters established in Guatemala and Jack Blanks as Director of the Program The basic objective was to support the various national programs and to reinforce all of the national components, including epidemiology, medical information system, and health education Accounts were set up along with transfer mechanisms The big challenge was the coordination activities Since OEPA is not an NGO, it is ineligible to apply for funding, but it can assist in chanelling support PAHO was involved with the concept of OEPA, but is in no position to develop funding strategies Each of the 6 countries submitted a national plan and financial mechanisms were re-established There have been training programs, as well as short-term consultants To everyone's credit, there have been bilateral agreements, between Brazil and Venezuela, between Ecuador and Colombia, and between Guatemala and Mexico which could very well serve as a model approach for countries in Africa As mentioned above, OEPA has provided a model for development of a coordinated African regional approach

It should be noted that Onchocerciasis is not a major public health problem in Latin America, but it certainly is a major concern for health activities in Africa Worldwide there are estimated to be 20 million cases If the disease could be eliminated in the Americas, there would follow a great political boost to the efforts in Africa OEPA provides an example of a functional infrastructure, getting the NGO groups together to provide sustainability If the Ivermectin community-based distribution is effective, it could well be related to other efforts in primary health, with vaccine programs, with malaria control, and certainly with health education In addition, if a functional MIS could be developed through OEPA, the onchocerciasis program could definitely have a substantial impact

OEPA deals with the Ministries of Health in the 6 countries not with the NGO's and not with the academic community, so there are problems associated with constant changes of political appointees With the bilateral meetings and agreements, there are issues about migration across country borders, with the transfer of drugs and jobs There are differences in the amount of financial support avaiulable for each national program with Brazil having $60 million and Venezuela having only $50,000 for the program

RIVER BLINDNESS FOUNDATION (RBF)

As originally developed, the RBF was developed to provide leadership and sustain the coalition of various PVOs (or NGOs) and governments in 3 countries in Africa in order to develop and implement Ivermectin Distribution Programs (IDPs) The RBF was to assist countries secure external funding for long-term sustainability In Latin America, the RBF was to provide staff for

the training and technical assistance for OEPA, along with unifying the regional coalition for the 6 countries involved In all 9 countries, RBF was to attempt to produce the epidemiology, training, organization, and financial resources necessary for sustainable nationwide control of onchocerciasis

RFB was to develop 2 divisions to assist with program development and program management and at the conclusion of these efforts, all 9 countries would have fully implemented nationwide control programs RFB wanted to serve as a catalyst to attract other resources, initially in the 9 countries, and then in other countries where onchocerciasis is found, and finally to relate to other primary health care aspects in developing nations

The current problems which inhibit national control programs include

1) lack of credible epidemiologic data,
2) lack of trained individuals
3) lack of coherent national plans,
4) lack of coordinated efforts by governments and PVOs to seek external resources

There is a likelihood that the World Bank and the InterAmerican Development Bank (BID) will support the technical aspects in Latin America If not, RBF planned to lead the coalition among governments and PVOs in seeking bilateral and private sources of funds It is hoped that USAID and RBF would provide leverage for additional money

APPENDIX F

APPENDIX F.

THE GLOBAL 2000 RIVER BLINDNESS PROGRAM (GRBP) REPORT

Roy E Brown, M.D., M P H

Cristanna M. Cook, Ph D

Trip Report January, 1997

THE GLOBAL 2000 RIVER BLINDNESS PROGRAM (GRBP) Report

EXECUTIVE SUMMARY

A field trip to the Jos Headquarters of GRBP was undertaken in January, 1997 to evaluate the operations of the Global 2000 River Blindness Program (GRBP) in Nigeria The purpose of this midterm evaluation is to assess the impact of USAID support for administative, data management, and training activities at the Nigeria GRBP program offices in Plateau State and in Lagos

The National Director, Dr Emmanuel Miri, prepared his staff in Jos to have all available documents and reports set out on a large U-shaped set of tables in a separate room that was set aside for our use during the weeklong visit In addition, the appropriate staff members were informed of our visit and time was arranged for extensive interviews with each of the key members both within the Jos Headquarters and in the Plateau State Ministry of Health (MOH)

A day long field trip was organized in the middle of the week, after we had an unrestricted opportunity to speak with the staff and to review the relevant documents During that field trip we visited a site where the Simulean vector flies were breeding and an active stream with a waterfall where the larvae are deposited We also witnessed the field distribution of Mectizan (Ivermectin) tablets to inhabitants of a distant village by the Community Based Distributors (CBDs), volunteers supervised by the Ministry of Health field staff

In addition, the Financial Director, Mrs Feyi Fadipe, flew in from the Lagos Office in order to share her impressive knowledge about the financial management processes and accounts with our team in Jos This saved a trip by our team from Jos to Lagos , and served to have an uninterrupted visit

The overall impression was one of complete candor on the part of both the GRBP staff and its director, as well as on the part of the workers on the Plateau State MOH staff There were times when the staff remained long after their customary working hours to assist our team in the assessment of their work Whatever documents, forms, and maps we requested were rapidly made available, questions were either answered immediately, or the staff member investigated and looked up the answer, and in general there was a high level of accomodation to our needs and every effort expended to give us whatever it was being sought The atmosphere was pleasant, extremely enthusiastic, and completely open in every respect Information was made available, documents were easily accessible, drivers were always available and prompt, and in general Dr Miri and his entire staff made our evaluation procedures easily accomplished

INTRODUCTION

What if you learned that a particular parasitic disease that was the world's 4th leading cause of blindness could be treated with a pill?

And, what if the company that developed and produced that pill offered to provide it free to anyone exposed to or anyone suffering from the disease?

Well, Merck and Company, producer of Mectizan (Ivermectin), has offered the oral medication without charge to anyone suffering from or exposed to Onchocerciasis, also known as River Blindness The parasite is *onchocercosis volvulus,* one of the family of filariasis, and the disease is transmitted by the bite of a black fly, *Simulean,* which serves as the insect vector in vast parts of Africa When slaves were brought to the Western Hemisphere, where the same family of flies were already found, the disease was introduced to certain parts of six specific countries in Latin America

Once the female fly bites an infected person and takes a blood meal, the parasites develop inside the fly, which when the next host person is bitten, the parasites enter the body, mature into adult filariae, and start producing offspring known as microfilariae These wander around the body subcutaneously, often entering the central nervous system and parts of the eye, resulting in vision impairment, and ultimately in blindness

The oral drug, ivermectin, kills these wandering microfilariae, but does not destroy the parent macrofilariae that remain in subcutaenous nodules throughout the body, making it necesssary for control of the disease to administer the medication on an annual basis for a period of 10-12 years, the livespan of the adult macrofilariae The vector black fly deposits its larvae in rapidly flowing streams, and once these achieve adulthood, the females proceed to bite humans, thereby transmitting the parsites in locations where the disease is endemic, thus continuing the cycle of onchocerciasis

It therefore is a matter of organizing the logistics needed to identify locations where the *Simulean* black flies are transmitting the disease and in all those endemic locations to administer Ivermectin orally once a year for a period of 10-12 years Since Merck has agreed to provide the drug *gratis* to anyone, anywhere, for as long as needed, it may appear to be a disease that could easily be eradicated

However, the locations where onchocerciasis is widespread are often isolated communities in places that at certain times of the year, mainly during the rainy seasons, are difficult or even impossible to reach Other important considerations include keeping track of those individuals who must receive the medicine annually, keeping inventories of the numbers of pills provided, since Merck has been granted a tax exemption of $3 00 per tablet from the U S Government, and following with evaluation as to decreasing prevalence rates

FOCUS OF REPORT

This preliminary report will document and discuss the efforts of the USAID funded program in the following areas

1 Provision of training, workshops and conferences on Onchocerciasis control or Ivermectin distribution, financial management, management information systems and GIS, or supervision which RBF/GRBP hosted or was instrumental in the development of such,

2 Development of health education and training materials by RBF/GRBP to be given to organizations and review for content, appropriateness, and usefulness and includes field manuals, procedure manuals, and the number and types or organizations requesting materials produced under the cooperative agreement and the utilization by the organization of these materials,

3 Provision of technical support provided by RBF/GRBP in management, assessment, treatment, planning, monitoring, and evaluation including the number of contacts, the types of organizations receiving support and the type of organizations given support,

4 Capacity building including partners who add sustainability after USAID funding is completed, and

5 The degree to which national plans have been suported and standardized and the degree to which primary, national reporting systems have been strengthened by the program including partners ability to document and track onchocerciasis activities using standardized indices implemented by GRBP

The overall impression of the functioning of RBF/GRBP on the above items was very positive and favorable The project was well run under the leadership of Dr Emmanuel Miri The staff members were well educated, qualified and enthusiastic More importantly, they appeared dedicated to what they were hired to do There were problems facing GRBP and a few aspects in the provision of health education training could be improved For example, one staff member indicated the need to provide more management training for staff and partners, mostly other NGOs which also have a need for improved management of their projects

MIS and GIS

This project has excelled in the use of MIS and GIS tracking systems for Onchocerciasis control The instruments developed for data intake (See Appendix B) are the standard for use in tracking and control of Onchocerciasis with other NGOs in Nigeria ATLAS is the GIS system in use The system appears to be employed as a device to visually summarize the levels of endemicity of the disease and treatment activities and to identify the areas still in need of treatment

However, the GIS adds little to the good reporting system in place under the leadership of Dr Korve The project uses Microsoft software for creation of spreadsheets and flat files for storage of community data In addition, the project has developed the Oncho Data Management Software which is the "real" data base which allows integrated files which eliminates data storage redundancy and makes retrieval of data easy for the average user This system works with a menu and allows simple data entry It maintains inventories of all areas treated by zone, state, local government area, district and community (See Appendix C for overview)

Data from the rapid assessment surveys and all records of Mectizan treatment at the community level are integrated This system is not as yet widely distributed The GRBP is in the process of providing training in the use of the software to those who will be using it Dr Korve showed the team his files in his current system There is an extensive amount of data on file Well thought out reports are generated on a monthly basis (see Apendix D for an example of reporting)

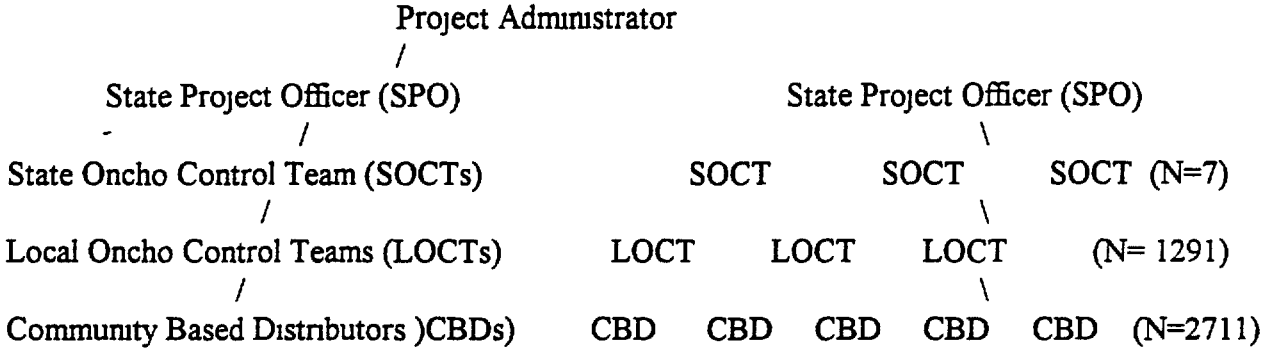
TRAINING, WORKSHOPS AND CONFERENCES

Training has taken many forms At the community level, training means providing health information and techniques of data recording and distribution of Ivermectin to selected community based distributors Appendix E provides the numbers of people trained at the various levels in seven states where GRBP has oncho projects for the years 1992-1996 The total number trained in IMO and ABIA States were 11,676, in EDO and Delta States were 3,152 trained, in ENUGU and ANAMBRA States 4,292 trained, and in PLATEAU State 4,520 trained The CBDs are the individuals who are selected because they have the necessary educational skills to read and write and are therefore able to carry out the data recording necessary to implement Ivermectin delivery to the community The GRBP also trains members of the Zonal Oncho Control Teams, the State Oncho Control Teams (See Appendix F for Organizational structure chart of overall Nigerian Oncho control program)

In addition, GRBP works in close collaboration with a number of government and non-government organizations to eliminate Onchocerciasis Part of this effort has involved training GRBP provides training for the National Oncho Control Task Force, developed an awareness campaign and advoacy workshops for community leaders to promote their "buying-into" the Ivemectin delivery programs, trained staff of other NGOs in GIS and SVE (Sentinel Village Evaluation) GRBP's procedures for sentinel evaluation is a standard for all other NGOs working in Oncho control in Nigeria

The training and supervision of health workers needed to administer the tablets and take care of any side effects must also be undertaken, along with health education of the communities where river blindness is found Technical support in the form of (a) management of the various programs, (b) assessment of the endemicity levels from hypo- through meso-, to hyperendemic levels, determined by the prevalence of subcutaneous skin nodules, and the (c) identification of sentinel villages that serve as a means of (d) monitoring and evaluating the impact of the treatment on the disease over time

Organization of this grassroots horizontal program is divided into tiers of responsibility for training and supervision as follows



The training and supervision is carried out by the level immediately above, with the SPO's trained by the project at Headquarters The SPOs, and LOCTs are employees of the Ministry of Health, with the volunteer CBDs selected by the communities, usually by the Health Committee Less than 50% of the communities in Plateau State have Health Committees, and there is currently a drive on to organize such local committees which help ivermectin distribution go smoothly

Dr Abel Eigege expressed a need for additonal funding of staff He would like to develop a sustainable management training center where other NGOs would come for development of management skills through training Sustainability would be helped through the development of materials that could be purchased by other NGOs The training plans of the management staff for 1997 include the following

1 Research the management training markets,

2 Perform assessments of clients/customers' training needs,

3 Develop and adapt existing public health management curricula,

4 Plan training workshops,

5 Conduct training workshops,

6 Carry-out post training follow-ups,

7 Evaluate training sessions,

8 Carry out advocacy among senior policy makers, and

9 Market training and raise funds for the center

HEALTH EDUCATION AND TRAINING MATERIALS

GRBP has been a leader in the development of training materials While these materials are impressive, it appears that some of the materials are in short supply and enough are not available for field workers Appendix G provides a list of the health educational and training materials developed by GRBP Two of the more effective tools are the Mectizan Distribution Pocket Guide and the Treatment Pocket Guide designed for easy reference by the CBDs The cloth flipchart is most appropriate and made of material that will not be destroyed with use It conveys a clear message about how river blindness is developed and how it can be controlled The album has graphic pictures of people with nodules and leopard skin and the pictures are interesting to inspect The team is not sure of the effectiveness of this training device

The team was unable to hear the radio jingles since they were not easily available It did not appear that too many people in the rural areas had a radio For example, in the village of Limerou the team observed that one man had a radio (he was second in command to the headman) However, many villagers had relatives in cities like Jos where radios may be more available and they may receive information about the Oncho program from them The film which is used for training is in both Renglish and Hausa and provides a clear explanation of the river blindness problem and solution The teaching techniques guide, trainers' curriculum guide, and field guides are all of the highest quality, but we do not know how they are employed in actual training sessions The content is found to be appropriate Post-training questions are also appropriate, not used to test participants but to serve as a self-monitoring guide The team did not see the slides that are used for training

TECHNICAL SUPPORT AND CAPACITY BUILDING

Technical support and capacity building are interrelated since the organizations listed as partners are those for which GRBP provides training Some of the organizations listed as partners are working with GRBP to develop outside funding sources The organizations that GRBP lists as partners include the National Oncho Control Program of the Federal Ministry of Health, State Ministries of Health, local governments, the NGOs of CBM, Africare, LIONS, MITOSATH, and UNICEF

As mentioned above in training, GRBP provides all of its training manuals and tracking forms to other NGOs The staff of MITOSATH were provided with training in Total Quality Management and provided with free logistical support GRBP and other NGOs helped develop the National Plan for Oncho Control and worked together to submit 4 proposals to APOC for additional funding

The overall strategy for the control of Oncho in Nigeria is to control the disease through chemotherapy by implementation of sustainable community-based programs to distribute Ivermectin Funding is now provided by Federal, local governments, and NGOs In 1996, APOC was established to provide effective and self-sustainable community-based treatment throughout the endemic areas for a period of 12 years APOC will provide up to 75% of budgets, but a minimum of 25% must come from the host governments and NGOs It is anticipated that with this new funding all of the endemic areas of Nigeria will have community based Ivermectin treatment programs

SUPPORT OF NATIONAL PLANS

One of GRBP's greatest strengths lies in its participation in the revised National Plan of Action for the Control of Onchocerciasis 1997-2001 GRBP spent time and money assisting the NOCP in developing the initial draft of the revised National Action Plan The National Director of GRBP is a member of the subcommittee that worked to finalize the plan

The plan reads well and is impressive Control activities are being integrated into the Primary Health Care system At the state level, the control staff is part of the Primary Health Care and Disease Control Department of the state ministries of health At the local government level, the onchocerciasis coordinator is responsible to the Primary Health Care coordinator who is in turn responsible to the Head of the Department of Health The Councilor for Health of the local government, a political appointee, has the authority At the community level, the control activities are the responsibility of the Village Health Committees Many communities do not have VHCs as yet and it is a priority of GRBP to help establish VHCs in all its own areas of control because things go better with such committees

All of the NGOs are part of the National Plan However, most of these are not only involved in Oncho control and therefore are not as successful as GRBP (See Appendix H for comparison data on successful treatment) Dr Miri plays a lead role in the NGDO or Non-governmental Organizatoin Coalition Group for Nigeria and this group is integrated into the organizational structure for the implementation of the national plan

Priority areas listed in the national plan include

1 To strengthen the NOVCP structure,

2 Mobility (Provision of transportation services for monitoring and supervision),

3 Development and printing of materials,

4 Training

GRBP is well equipped to provide help in priority areas 2,3, and 4

The Drug- MECTIZAN (Ivermectin)

The medication being distributed is mectizan, also known generically as ivermectine MSD, provided without charge by Merck and Company In addition to the elimination of the microfilariae of onchocerciasis, there is a remarkable list of other parasites against which it is also effective

This list of additional targets, not unsubstantial in certain tropical areas, includes ascariasis, hookworm, lice, scabies, and certain fungal infections Most importantly, individuals passing ascaris or roundworms, are aware of this benefit, and will tend to share this experience with others in the community, thereby enchancing compliance with drug distribution Anecdotally, there has been reported a general positive feeling of health associated with and following the annual dosing For example, some women suffering from ammenorrhea, have described a return of their periods following a dose of mectizan

Certain side effects have also been described, especially following the initial dose of mectizan These include itching, rash, vomiting, pains, and swelling especially of the face, and occasional fever In addition, mild dizziness, diarrhea, and difficulty in breathing have also been mentioned, but in general the adverse reactions tend to be mild, subside rapidly and become lessened with subsequent annual doses The CBDs are trained to describe these reactions to the community members and they are also trained to deal with and manage these reactions which might occur for several days following the administration of mectizan In Plateau State these is a "Pocket Treatment Guide" prepared in both English and Hausa, providing the CBDs with instructions as to how these adverse reactions are to be managed, and when it may be necessary to refer the individual to a physician

Our team was told of boxes of Mectizan being stolen and then sold in the marketplace, and that in addition, another brand of ivermectin, made in India, was being sold on the Black market These diversionary routes of the drug are being investigated, but it tends to support the concept that people in Nigeria appreciate the value of ivermectin, to the extent that there is a marketplace for selling the medication It has been rumored that libido is enhanced with ivermectin, and this alone may account for the popularity of the drug Another rumor that we were told was that ivermectin was actually a contraceptive, and this had to be immediately denied as a potential source of interference Local religious leaders were requested to assist with this effort

At the port of entry to Nigeria, Lagos customs officials last year, 1996, held up the passage of mectizan because of the value placed on each tablet in the shipment by Merck and Company of US $3 00, representing the tax exemption amount alllowed by the U S Givernment The customs officials, once they learned of the high value of hundreds and thousands of tablets, wanted to have their "share" and proceeded to hold up the shipment This process seriously interfered with the distribution to the various PVOs working in the different States, and caused major disruption in the entire process

After a period of time, with the kind assistance of UNICEF, the shipment was processed via a diplomatic permit, which will be employed in the future There is an Africare warehouse in

Lagos that is currently employed for stockpiling tablets from the port, and from there the distribution proceeds by means of the representatives of the various PVOs, and then to the State Ministries of Health for field distribution At each waystation, there must be a clear and complete accounting of the tablets, and there are documents and forms to be completed to guarantee that no tablets are lost and all unused tablets are returned and fully accounted for

Starting in 1997, Merck will introduce several modifications in Mectizan, including reducing the tablet size from 6 miligrams to 3 miligrams, shipping tablets in bulk containers, reducing the cost of packaging by eliminating foil-wrapping for each individual tablet In addition, pregnant women will no longer be excluded from the drug distribution, and children as young as 2 years of age are now considered safe to receive the medication

BACKGROUND.

According to the WHO Expert Committee on Onchocerciasis Report, of the large majority of the total global population infected and those blinded as a result of onchocerciasis, a figure amounting to 99% live in tropical Africa In the highly visible and very costly Onchocerciasis Control Program (OCP) in 11 countries in Africa there is a vertical centrally- directed approach, employing widespread vector control by chemically dosing the rivers, resulting in a very significant reduction in the numbers of infected blind persons in the original OCP area, including Benin, Burkina Faso, Ivory Coast, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Togo, Senegal, and Sierre Leone

In the African Program for Onchocerciasis Control (APOC), other African countries are involved in a grassroots horizontal program of providing Ivermectin medication orally on an annual basis, including the following countries Nigeria, Uganda, Cameroon, Angola, Burundi, Central African Republic, Chad, Congo, Equatorial Guinea, Ethiopia, Gabon, Liberia, Malawi, Sudan, Tanzania, and Zaire APOC is a decentralized, horizontal program of ivermectin distribution involving government health workers working in collaboration with Non-Governmental Developmental Organizations (NGDOs), and direct commitment of local volunteers, who are trained and supervised in the villages by local government health workers

In 1990, the River Blindness Foundation (RBF) started a small pilot program in 2 Nigerian states and by 1991, following discussion with the Federal Minister of Health, his staff, and with State MOH in Plateau State, it was decided to launch a large, state-wide onchocerciasis control program The RBF personnel trained and supervised state and local health workers, and by 1993, similar projects were initiated in 4 more Nigerian states, eg Abia, Delta, Edo, and IMO, employing the same strategy of using state and local health workers after training, along with supervision and guidance from the RBF staff

By 1991, USAID and RBF funded the PVO Africare to distribute ivermectin in Adama and Taraba States, and by 1993, in Borno State, all of which have severe onchocerciasis associated with blinding A Federal 5 year plan was developed with RBF assuming the leadership of a coaltion of PVOs that would work with both Federal and State governments Thus, USAID matching funds were designed to enable RBF to develop a nationwide onchocerciasis control strategy for Nigeria, based on State government MOH in collaboration with PVOs in all 24 states where Onchocerciasis is endemic

The PVOs first included UNICEF, Africare, Sight Savers (UK-based), Christoffel Blindmission (Germahy-based), the International Eye Foundation and later, the Lions Club International, World Vision International, Child Association of Nigeria, Mitosath, and International Foundation for Education and Self-Help Support was needed to train personnel who were required to complete REM and REA, to distribute ivermectin, and to establish a training laboratory in Plateau State for the development of training materials and other centralized assessment functions

In April, 1996, RBF turned all of its commitments and resources over to Global 2000 of the Carter Center in Atlanta, and Dr Emmanuel Miri continued as Director of the GRBP, as well as Chairman of the Nigerian Onchocerciasis Control Program GRBP has as its stated goals the on-going statewide collaborative control programs in 7 states, working with the MOH, as well as active participation in national level activities On the local and regional level in the 7 assigned states, GRBP develops educational and training materials, refines the management and oversight methods, and creates replicable models On the national level, GRBP assists with coalition building, works with the support of NOCP to support the National Onchocerciasis Task Force (NOTF) and the Zonal Onchocerciasis Task Force (ZOTF) in the 4 zones of Nigeria In addition, there is the need to identify additional resources

The stated aims of GRBP include

To strengthen the MOH system to deal with the problem of onchocerciasis by means of technical support, administrative support, financial support, and logistical support,

To promote replicable and sustainable programs that are cost effective, culturally acceptable, fully integrated into MOHG/PHC system, with community participation and community ownership

There are 13 key state level GRBP program steps as follows

1 Preliminary program assessment and planning
2 Appointment of MOH program coordinators - identification of staff
3 Appointment and orientation of SOCT
4 Identification and training of LOCT
5 Rapid epidemiologic assessment and mapping
6 Selection of eligible communities
7 Formalization of distribution methodology (passive and active distribution)
8 Training of CBDs and VHWs
9 Health education and community mobilization campaigns
10 Mectizan distribution

11 Monitoring and supervision by means of MIS
12 Evaluation by means of sentinel villages
13 Program adjustment and modification

Approximately 5-10% of the mectizan distribution is through **passive** distribution system, whereby the community health clinic workers distribute the tablets to individuals coming to the health centers and the EPI Units in hypoendemic areas The individuals receiving the mectizan in this fashion are recorded in a book and monthly summaries are submitted to the MOH Approximatley 90-95% of the mectizan is distributed **actively** by means of CBDs at the grassroots level who are currently not paid, but as volunteers are respected and receive community- provided incentives

ISSUES AND CONCERNS

1 Mectizan Supply

As occured in 1996, the mectizan supply was held up in customs at the port of Lagos and it finally took UNICEF declaring diplomatic status for the drug to be permitted to enter into the national distribution program Customs officials, noting that Merck had placed a value on Mectizan of US$3 00 per tablet, felt that they were entitled to a certain amount of compensation (bribe) to permit the tablets to enter the country This was eventually resolved, but the delay placed the distribution program into disarray It is clearly essential to have an adequate supply of mectizan on hand in each of the various states so that annual distribution can proceed without any delay or interruption

There is also a certain amount of pilfering of tablets, and these are often sold on the open market In addition, an Indian product of a new brand of mectizan, was discovered being sold in the marketplace, and this is being followed and traced Obviously, there is an interest on the part of the general public to have mectizan, if there is a willingness to pay for a product that is being distributed *gratis* It may be promoted for reasons other than control of river blindness through microfilaricidal action

2 Ministry of Health System

In certain locations, there may be a lack of adequate political support and commitment to the program of control of onchocerciasis through mectizan distribution There is another difficulty with the frequent and periodic replacement of state governors, as military officers are appointed, then promoted and subsequently reassigned This necessitates contact with the new governor and the repeated description of the NOCP to each successive governor, which takes up the time of the National Director

3 Statewide Coverage Concerns

Since neighboring states with poor distribution and thereby poor control of oncho, there can be reinfectivity and retransmission if control is not universal Many programs have yet to achieve their target

4 During our site visit, there was observed a problem in Taraba State where the Africare team decided to undertake Mectizan distribution themselves, without the involvement of LOCTs of the MOH, nor CBDs at the village level The State MOH objected to this approach, and appealed to the NOCP Dire :or, Dr Miri, to intercede and to clarify to Africare that another NGO would replace its program in Taraba Dr Miri learned that Africare had a low opinion of the MOH field staff, and considered these individuals not trained well enough to undertake the distribution The Africare staff itself was distributing mectizan, and this process was insufficient to cover all of the endemic areas Dr Miri arranged to have UNICEF assume the NGO responsibility for Taraba State coverage using CBDs and a the customary grassroots approach

5 Sustainability

With 1997, certain areas of Nigeria, specifically Plateau State, are entering the 6th or even the 7th round of annual distribution, and there has been documented a definite decrease in the prevalence rate of onchocerciasis, In certain communities, people are aware of a reduction in the prevalence of nodules and blindness, and as a result of the success and effectiveness of mectizan, there is anticipated an increase in refusals with reduced interest and a fall-off in the compliance This has concerned Dr Miri and his staff, and therefore a renewed effort will be undertaken to stoke the fires, promote continued compliance, and attempt to positively influence the continued compliance in the acceptance of oral mectizan There will be greater emphasis on health education at the village level and exploration of integration with other PHC activities Some interest has been expressed in cost recovery, but as was demonstrated in neighboring Cameroon, this has led to a drop-off in compliance There continues to be an emphasis on community participation and in local ownership of the program

6 Robbery

There is noted an increase in pilfering of mectizan tablets to be sold, along with stealing of other supplies For example, Jos GRBP has lost 3 vehicles, and this is thought to be a recent phenomenon There is a political and economic relationship to this development

7 Sentinel Surveillance

With periodic skin snipping, there is a concern about the transmission of HIV and of hepatitits since non-disposable equipment is being employed There has been an attempt to sterilize all of the equipment used for these techniques In addition, because of the invasiveness of skin snipping, there has been a modification reducing this examination from annually to biannually in an effort to improve the community cooperation

APPENDICES

INDIVIDUALS MET	POSITION
Dr Emmanuel Miri	National Director
Dr Victor Oluyemi	Assistant National Director
Dr Kenneth Korve	Technical Coordinator
Dr Abel Eigege	Training Officer
Ms Ifeoma Umolu	Training Officer
Mr Kehinde Oyenekan	Office Manager
Mr Peter Ndochi	Finance Officer
Mr Chuwang Gwomkudu	Scientific Officer
Mrs Keyi Fadipe	Financial Director (Lagos Office)
Mr John Imaru	Plateau State MOH Project Officer
Mr Sani Jugu	MOH State Oncho Control Team
Mr Iliya Haruna	MOH State Oncho Control Team

APPENDIX A

RAPID ASSESSMENT FORM A.
VILLAGES EXAMINED AND OUTCOME

Plateau State OCP

District **LGA:**

LOCT Name

Date	Name of Community Examined	Estimated Population	Number in Sample		Persons with Nodules	Persons with LS
			M	F		

Total Number of Communities Nodule Positive _____

Total Number of Communities Nodule Negative _____

25

RAPID ASSESSMENT FORM B.
NODULE POSITIVE COMMUNITIES
Plateau State OCP

Date

Village	LGA
District	Ward
CBD Name	LOCT Name

Number of Persons in Sample _____ Number of Persons Positive for Nodules._____ Number of Persons Blind in Community:_____ Estimated Population

S/N	Name of Person Nodule Positive	Age	Number Nodules	Leopard Skin	Blind	Observations

For office use only

Nodule Prevalence (%)	*Leopard Skin Prevalence (%)*	*Blindness (%)*	*Village Is Category*

53

WARD _____ Date of Registration ___ / ___ / ___

INDIVIDUAL HOUSEHOLD MEMBERS NAMES	19	19	19	19	19
1) Household Head					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					
11)					
12)					
13)					
14)					
Supervisor Signature					

A = Absent P = Pregnant L = Lactating U = Under 5 years old S = Sick R = Refusal

Personal Treatment Card

Name _____

M / F Age _____

Village _____ *LGA* _____

Dispensing Center _____

Date _/_/_ *Treatment Month* _____

Tx No.	1	2	3	4	5	6	7	8	9	1
Punch										

APPENDIX B

Date

Village: LGA

Distnct Ward

CBD Name ·

RECORD INFORMATION 19...

Dates Treatment Started ___/___ Ended ___/___			
Total Number of persons in Households (**Estimated Population**)			
[redacted]			
Total No of **Persons who** should have taken Mectizan®	**Males**		
	Females		
Total No of **Persons** actuallyTreated with Mectizan®	**Males**		
	Females		
Total No of Mectizan® **Tablets Used** in this Community			
Total No of **Persons** who **Reacted**			
Total No of **Persons Blind**			
Total No of **Households Visited**			

Supervisor's Review (Date & Signature)

___/___

Received Compensation (Date Name & Signature of CBD)

___/___

Summary of individual treatment rounds	1	2	3	4	5	6	7	8	9	10

CLINIC BASED MECTIZAN® REGISTER

LGA/District	Mectizan® tablets recieved	Date
Name Of Distributor	Mectizan® tablets used	Date
Name Of Clinic	Mectizan® tablets balance	Reorder Date

Date	Patient Name	Age	Sex	Village of Origin	Village of Residence	Criteria for Treatment	Height	Number of Tablets	Reacted Y or N	Blind Y or N	Treatment Round	Remarks
							TOTAL TABLETS					

The above is a true representation of Mectizan® treatment in the above clinic and I hereby testify to this fact

LOCT's Name ____________________ Signature ____________________ Date ___/___/___

[redacted] (CDD) Treatment Chart

IMPORTANT: Please check each * (box) of the treatment that is given.

☐ Treatment Number 1:

For Mild Dehydration or Diarrhea use Salt and Sugar Drink
Use enough clean water to fill one beer bottle or enough to fill two mineral bottles. Add ten small spoons of sugar (or 5 cubes of sugar) and one small spoon of salt to the water and mix.

☐ A child who is 5 to 10 years old should finish a beer bottle in about 4 hours.

☐ Older children (11 to 15 years of age) should finish the beer bottle in about two hours.

☐ Adults (16 years and older) should drink as much as they can and finish the bottle in 1 to 2 hours.

☐ Treatment Number 2:

If the person is so dizzy that they fall down or so dizzy that walking is difficult then go get a nurse immediately. Give them some salt and sugar drink but do not wait until they have finished drinking

☐ Treatment Number 3

For Itching, Rash or vomiting give Phenergan
The dose of phenergan depends upon the age of the person.

AGE	DOSE	TOTAL TABLETS	TABLETS GIVEN
☐ 5 to 15 years	1/2 tablet, 2 times a day for 3 days	3 tablets	_____
☐ Adult	1 tablet, 2 times a day for 3 days	6 tablets	_____

☐ Treatment Number 4:

For Pain or Swelling give Paracetamol
The dose of Paracetamol depends upon the age of the person:

AGE	DOSE	TOTAL TABLETS	TABLETS GIVEN
☐ 5 to 15 years	1 tablet, 3 times a day	4 tablets	_____
☐ Older than 15	2 tablets, 3 times a day	8 tablets	_____

☐ Treatment Number 5

For Fever give Chloroquine and Paracetamol *
(* Note: If the person is allergic to Chloroquine, give Phenergan 30 minutes before treating with Chloroquine.)
The dose of chloroquine depends upon the age of the person.

AGE	FIRST DOSE	AFTER 6 HOURS	AFTER 1 DAY	AFTER 2 DAYS	TOTAL	TABLETS GIVEN
☐ 5 to 12 years	2 tablets	1 tablet	1 tablet 2 times a day	1 tablet 2 times a day	7 tablets	___ tablets
☐ 13 yrs or older	4 tablets	2 tablets	2 tablets 2 times a day	2 tablets 2 times a day	14 tablets	___ tablets
Also give paracetamol (see Treatment Number 5)						

☐ Treatment Number 6:

For difficulty in breathing – Refer to a Health Professional

☐ Treatment Number 7

If too dizzy to walk – Refer to Health Professional

DEPARTMENT OF PRIMARY HEALTH CARE & DISEASE CONTROL

NATIONAL ONCHOCERCIASIS CONTROL PROGRAMME

RAPID ASSESSMENT METHOD FOR COMMUNITY DIAGNOSIS OF ONCHOCERCIASIS

STATE _____ LGA _____ DISTRICT _____

VILLAGE _____ POPULATION _____ PHC No. _____

SUPERVISOR: _____ ENUMIRATOR. _____

S/NO	NAME	SEX	AGE	HOUSE NO.	LS	NODULES
1						
2.						
3						
4						
5						
6.						
7						
8						
9						
10						
11						
12.						
13						
14						
15						
16.						
17						
18						
19						
20						
21						
22.						
23						
24.						
25						

KEY / CODE. Leopard Skin (LS) O = absent. 1 = present

Nodules O = absent, If present indicate number palpated

Sex M = Male F = Female

SUMMARY % PREV OF LS ☐ % PREV OF NODULES ☐

RECOMMENDATION Large Scale Treatment YES ☐ NO ☐

SOFTWARE DESIGN

The Oncho Data Management Software uses menus to make it easier for you to select the functions or operations that you want the computer to perform The software has a **Main Menu Bar** and a variety of pull down and pop-up **submenus** which offer additional functions The software's Main Menu options submenus and their functions are outlined below

INVENTORY	RAM SURVEYS	TREATMENT	UTILITIES	REPORTS	QUIT
Maintains inventory of Zones States, LGAs, Districts and Communities treated or under treatment Also stores their unique ID codes	Maintains records of RAM Survey results at the Community level	Maintains records of Mectizan® Treatment results at the Community level	Enables data back up, export, merge, and *password* specification	Enables production of nine standard reports on RAM and Treatment	Enables user to exit software
Pull-Down Menu	***Pull-Down Menu***	***Pull-Down Menu***	***Pull-Down Menu***	***Pull-Down Menu***	
Lists options to add, edit, delete, browse, or print States LGAs, Districts or Communities in the Inventory	Lists options to add, edit, delete or browse a RAM Survey record	Lists options to add, edit, delete or browse a Community Treatment record	Lists different options available under Utilities	Lists types of standard RAM and Treatment reports available	
Pop-Up Screens	***Pop-Up Screens***	***Pop-Up Screens***	***Pop-Up Screens***	***Pop-Up Screens***	
Individual colour coded screens for adding, editing, deleting browsing and printing Inventory data	Individual, colour coded screens for adding editing deleting and browsing RAM Survey records	Individual, colour-coded screens for adding, editing, deleting and browsing Treatment records	Provide step-by-step instructions for carrying out Utilities functions	Provide step-by-step instructions for printing reports	
Help Key	Help Key	Help Key	Help Key	Help Key	
Provides *scrollable* lists of States LGAs Districts, Communities and their corresponding ID codes	Provides scrollable lists of States, LGAs, Districts, Communities, and their ID codes Also lists Survey Dates in chronological order	Provides scrollable lists of States, LGAs, Districts, Communities, and their ID codes Also lists Treatment Dates in chronological order	Provides scrollable lists of States LGAs, Districts, Communities, and their ID codes	Provides scrollable lists of States, LGAs, Districts, Communities, and their ID codes	

APPENDIX C

GLOBAL 2000 RIVER BLINDNESS PROGRAM (GRBP)

Report for the Month of December, 1996

I TREATMENT ACTIVITIES

Treatment

Mass distribution of the last batch of mectizan tablets was done this month in all the projects In Enugu/Anambra project, it commenced on 9th December, 1996 A total of 72,937 persons were treated in Anambra state, while 122,306 persons were treated in Enugu state This brings the cummulative total number of persons treated in Anambra and Enugu states to 287,239 and 354,535, respectively

In Plateau State, 79,200 persons were treated with 124,536 tablets mectizan for the month of December The cummulative total comes to 562,578 persons as against the annual target of 650,000

Imo/Abia project treated 199,991 persons in Imo state with 299,426 5 mectizan tablets, while 99,573 persons were treated in Abia state with 150,876 tablets

In Edo state, a total of 236,000 mectizan tablets were used to treat 153,954 persons in 211 villages, while a total of 132,427 persons were treated with 186,210 tablets in 58 villages in Delta state

See Table 1 for more details on treatment From the table we can see that the targets for HRVs and ARVs are not realistic This is because villages assessed are usually treated together with those adjacent to the endemic ones As a result it is difficult to predict the target villages to be treated We will work out more realistic targets for 1997

II STATUS OF IVERMECTIN

Table 2 shows the status of mectizan tablets used in December, 1996

Table 2 Status of mectizan

State	Tablets used	Cumm. Tablets used	Tablets in the field	Tablets in the store
ABIA	150 876 0	656 606 0	0 0	0 0
ANAMBRA	116,009 0	446,736 5	26,764 0	0 0
DELTA	186,210 0	547,808 0	0 0	0 0
EDO	236,000 0	679,959 0	0 0	0 0
ENUGU	185,905 0	532,865 5	8,635 0	0 0
IMO	299,426 5	849,932 5	0 0	0 0
PLATEAU	124 536 0	881 902 5	6,870 0	41,026 0
TOTAL	**1,298,962 5**	**4,595,810 0**	**42,269 0**	**41,026 0**

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III ASSESSMENT

Assessment surveys were conducted in Enugu, Anambra and Delta states In all, 54 villages were assessed Out of this number, 9 villages were found to be hyper-endemic, 6 villages were meso-endemic, 35 villages were hypo-endemic while 4 villages had no trace of onchocerciasis Table 3 gives more details on assessment Rapid assessment has been completed in Imo, Abia, Edo and Plateau states

Table 3 Status of rapid assessment surveys

State	No of villages Assessed	Cumm. No. Assessed	Assessment Target for 1996	Percent of Target	Endemicity Level			
					Hyper	Meso	Hypo	None
ANAMBRA	20	517	529	97 7%	0	4	12	4
DELTA	16	232	500	46 4%	9	2	5	0
ENUGU	18	1,012	400	253 0%	0	0	18	0
TOTAL	**54**	**1,761**	**1,429**	**123.2%**	**9**	**6**	**35**	**4**

A cross - validation exercise of 6 villages was concluded in Imo state

IV TRAINING AND RESEARCH

Training/retraining was done in Anambra, Enugu, Imo and Plateau states 5 LOCTs and 26 CBDs were trained in Anambra state, while 93 CBDs were trained in Enugu state Imo and Plateau states had 377 CBDs and 66 CBDs trained/retrained, respectively See Table 4 for details on training activities

Table 4 Status of training activities

State	No. Trained	Cumm. No. Trained	Training Target for 1996
ABIA		SOCTs = 6 LOCTs = 90 CBDs = 1,807	SOCTs = 6 LOCTs = 85 CBDs = 1,200
ANAMBRA	LOCTs = 5 CBDs = 26	SOCTs = 5 LOCTs = 66 CBDs = 1,126	SOCTs = 5 LOCTs = 50 CBDs = 908
DELTA		SOCTs = 5 LOCTs = 101 CBDs = 460	SOCTs = 5 LOCTs = 88 CBDs = 917
EDO		SOCTs = 5 LOCTs = 61 CBDs = 524	SOCTs = 5 LOCTs = 75 CBDs = 720

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ENUGU	CBDs = 93	SOCTs = 5 LOCTs = 75 CBDs = 1,433	SOCTs = 5 LOCTs = 55 CBDs = 1,231
IMO	CBDs = 377	SOCTs = 5 LOCTs = 105 CBDs = 2,256	SOCTs = 5 LOCTs = 105 CBDs = 1,700
PLATEAU	CBDs = 66	SOCTs = 5 LOCTs = 56 CBDs = 1,013	SOCTs = 5 LOCTs = 56 CBDs = 1,043

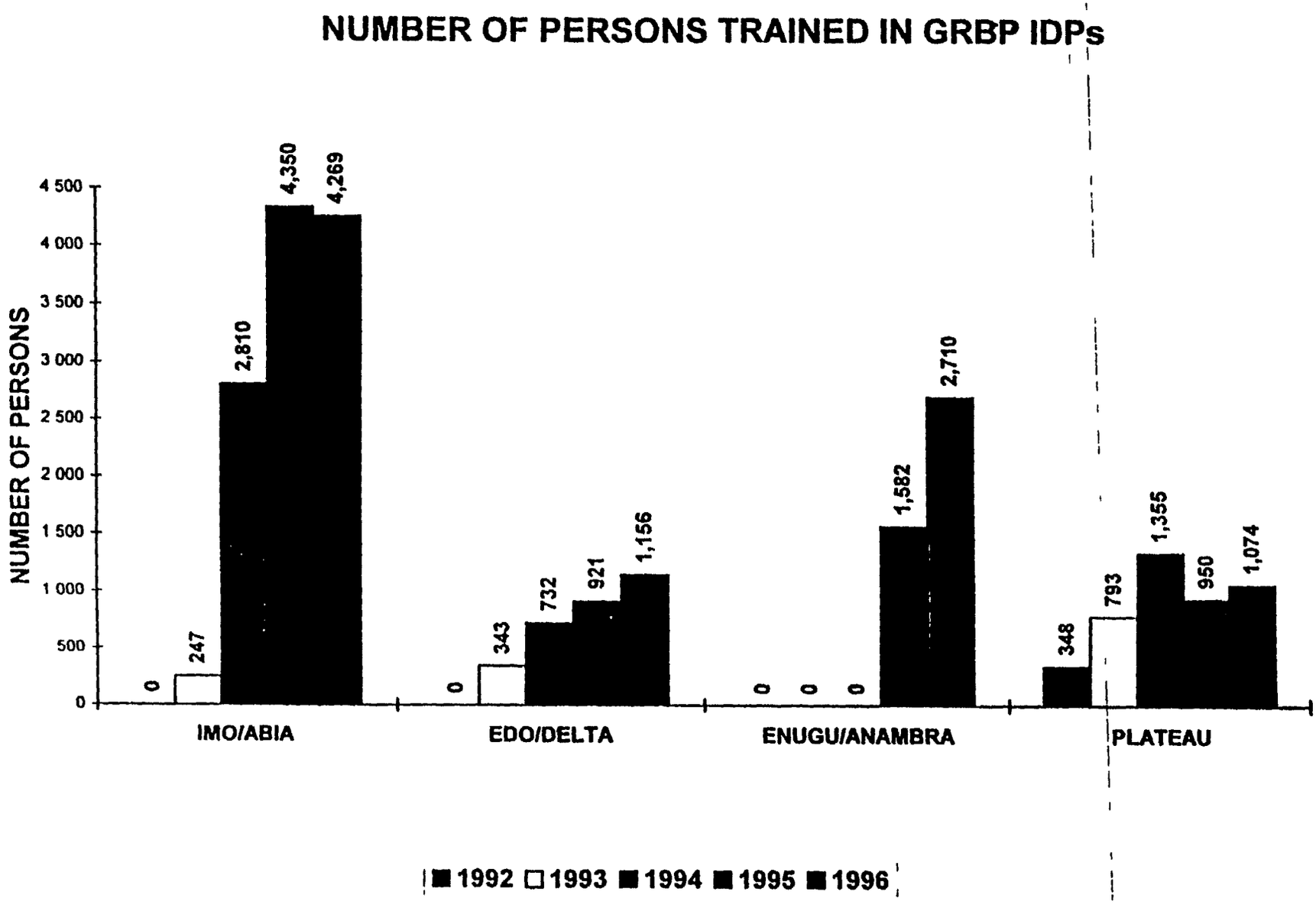
V ADMINISTRATIVE ISSUES

The month of December is usually a month of low activities since the offices are normally closed for about one month However this year has been an exception because mectizan tablets came in just before the one month break Activities therefore had to continue, although on a skeletal basis

We also had the reunion and graduation ceremony of the first in-country TQM training course at the National office in Jos (November 30 - December 6, 1996) Presentation of the management training project reports were made during this period These projects were initiated after the management training workshop conducted in August this year

The National Director, Dr Emmanuel S Miri was in Atlanta, USA from December 8 - 12, 1996 for the annual program review at the Carter Center Inc He came back to Nigeria after the program review

APPENDIX D


NUMBER OF PERSONS TRAINED IN GRBP IDPs
NUMBER OF PERSONS
4 500
4 000
3 500
3 000
2 500
2 000
1 500
1 000
500
0
0
247
2,810
4,350
4,269
0
343
732
921
1,156
0
0
0
1,582
2,710
348
793
1,355
950
1,074
IMO/ABIA
EDO/DELTA
ENUGU/ANAMBRA
PLATEAU
1992 1993 1994 1995 1996

TRAINING IN ONCHOCERCIASIS CONTROL

Training and holding of Workshops related to Onchocerciasis Control is an essential component of Ivermectin Distribution Programme (IDP) It is for this reason that right from its inception, continuous training of personnel involved in providing treatment on the field has been given a pride of place This is clearly evident in the frequency and number of trainees who have benefited from this exercise A summary of health providers trained is detailed below

1992

Plateau

SOCTs	**10**
LOCTs	**111**
CBDs	**227**

1993

SOCTs	
Imo/Abia	10
Edo/Delta	10
Plateau 12	
LOCTs	
Imo/Abia	37
Edo/Delta	50
Plateau 154	
CBDs	
Imo/Abia	200
Edo/Delta	283
Plateau	627

1994

SOCTs	
Imo/Abia	14
Edo/Delta	10
Plateau	10
LOCTs	
Imo/Abia	85
Edo/Delta	59
Plateau	54
CBDs	
Imo/Abia	2,711
Edo/Delyta	663
Plateau	1 291

1995

SOCTs

Imo/Abia	10
Enugu/Anambra	10
Edo/Delta	10
Plateau	9

LOCTs

Imo/Abia	166
Enugu/Anambra	40
Edo/Delta	106
Plateau	51

CBDs

Imo/Abia	3,369
Enugu/Anambra	959
Edo/Delta	609
Plateau	890

1996

SOCTs

Imo/Abia	11
Enugu/Anambra	10
Edo/Delta	10
Plateau	5

LOCTs

Imo/Abia	195
Enugu/Anambra	141
Edo/Delta	162
Plateau	56

CBDs

Imo/Abia	4063
Enugu/Anambra	2559
Edo/Delta	1,013

The re-training exercises have continually provided us with opportunities to reassess the best possible ways of improving the quality of these health providers This is because experience gathered on the field has provided us with insights that have necessitated some changes in our treatment methods and protocols, coupled with variation in the information required in the various forms used on the field which has immensely strengthened our Management Information System (MIS)

Impact

1 It has strengthened States Ministry of Health and Local Government health system to deal with Onchocerciasis as a health problem by developing a corp of trained personnel with enough technical capability to support and sustain a cost-effective Statewide Oncho Control programme

2 It has promoted replicable and sustainable programmes by encouraging local ownership and community participation, and also fashion out a culturally acceptable Oncho Control programme that is fully integrated into Ministry of Health through the Primary Health Care system

Financial Management

In August 1995 and July 1996, Workshops / Training were held for Finance Officers from all the Projects including those from the National Office and Lagos The objective was to create a forum for exchange of ideas among the finance personnel, and work out modalities for improved accountability of finance in all the projects

Impact

An improved and more unified approach to financial accounting challenges and problems faced at the projects, and a speedy submission of monthly accounts to the headquarters

Management Information Systems

An important part of training given to personnel involved in ivermectin distribution is in the use of various forms developed for recording information related to their activities on the field Often, especially during re-training exercises, some of these forms have had to be modified in the light of experience of these personnel on field |And the outcome have been a major input into setting up of the Geographic Information System (GIS) In June 1996, the Country Representative and the MIS/Programme Specialist of Africare/ Nigeria attended a training session on GIS given by our Technical Coordinator, DR. K Korve and our Laboratory Scientist, Mr C G Chuwang, here at Global 2000 National Office, Jos

Impact

1 A detailed and accurate report of all aspects of ivermectin distribution exercise on the field which makes programme reporting relatively easy and meaningful

2 Capacity building of other NGDOs (e g Africare) involved in IDPs It is expected that Africare will also impart this knowledge to other NGDOs

Supervision

This is an important pivot on which the execution of IDP stands And because of the mode of carrying out this function, supervision becomes a very crucial component of any training exercise For example, at the State level, State Project Officers (SPO) are trained

are trained to supervise State Oncho Control Team (SOCT) members under them, SOCTs are trained to supervise a greater number of Local Oncho Control Team (LOCT), while LOCTs also oversee a much greater number of Community-Based Distributors (CBDs) Each category of these trainings have their peculiarities, and an awareness of these peculiarities lend specificity to each category This has made focus on supervision crucial at any level of training conducted by this programme

Impact

1 An acute consciousness of the necessity to be efficient in carrying out assignments
2 Defects in execution are easily detected and corrected before damage is done to the programme in affected communities

Documents on Display:

1 A schedule of trainings conducted at the National Office, in the Fourth Quarter 1994, 1995, and 1996
2 Sample Agenda of some of the Training/Workshops
3 Sample reports
4 Agenda of Finance Officers' Workshop and highlights of the workshop's focus

TRAINING / WORKSHOPS

OCTOBER - DECEMBER
NATIONAL OFFICE, 1994

Event	Participants	Month	Venue	Purpose
SPO Workshop	SPOs representing Imo, Abia, Edo, Delta and Plateau States	October 10 - 12	RBF National Office	Managing ID Statewide basi Supervision effective On Control
SOCTs Workshop	25# SOCTs from Edo, Delta, Imo, Abia, Plateau (Five from each State)	October 17 - 19	RBF National Office	Protocol for ef Mectizan distri and supervisi LOCTs, record and accounta

WORKSHOPS/TRAINING/CONFERENCES
NATIONAL OFFICE
1995

EVENT	DATE	VENUE/ HOST	PARTICIPANTS	PURPOSE
SOCTs Workshop	January 19, 20 & 21	GRBP National office	SOCTs from all projects	Retraining on IDP
Training of 2# sets of LOCTs	January 26 and 27	GRBP National office	# of LOCTs from Plateau Project	Basic training in all aspects of State-wide IDP in Plateau State
Conference	February	Miango Rest House, Jos	Nigerian NGDOs Jeff Watson attended & Spoke on Onchocerciasis control & the potential for integrating it into existing private systems	To consolidate & improvement efforts toward better health care & social service conditions in Nigeria
Workshop for Data Entry Clerks	April	GRBP National office	Attended by all Data Entry Clerks/Secretaries in all the projects & the National office	To equip Data Entry Clerks with necessary skills for entering data for analysis & harmonize format for entering data in all GRBP projects
Workshop	June	GRBP National office	18 participants from NOCP, Afrcare, WHO, IFESH, IEF, World Vision, Sight Savers and CBM	Review of draft forms to be used by CBDs in all IDPs in Nigeria for the purpose of harmonizing reporting of Onchocerciasis activities in Nigeria
Training of NGDO personnel for SVE	June	GRBP National office	Six Afrcare field personnel	To acquaint them with what is involved in conducting an accurate SVE and empower them to replicate same in their programme
Workshop for LGA officials in Plateau	July	GRBP National office	LGAs top officials in Plateau State - Health officers, information officers, community development officers, Education secretaries and Agricultural officers	Inform, educate and empower them for the purpose of enlisting administrative support for the programme and also serve as advocates for the programme

Finance officers workshop	August	GRBP National office	All Finance officers at the project offices and National office, Jos The Financial Director conducted the workshop	
Nigeria Parasitology Conference	September	GRBP National office	Parasitologists and other scientists in Nigeria	To review current development in Parasitology, including Onchocerciasis and other parasitic diseases Our Technical Director presented a paper titled An Essential Aspect of Onchocerciasis Control The PA in our Imo/Abia project also presented a paper titled Efficacy of Mectizan in the treatment of Gastro - intestinal helminths in Isuochi community Abia State

WORKSHOPS/TRAINING/CONFERENCES
NATIONAL OFFICE
1996

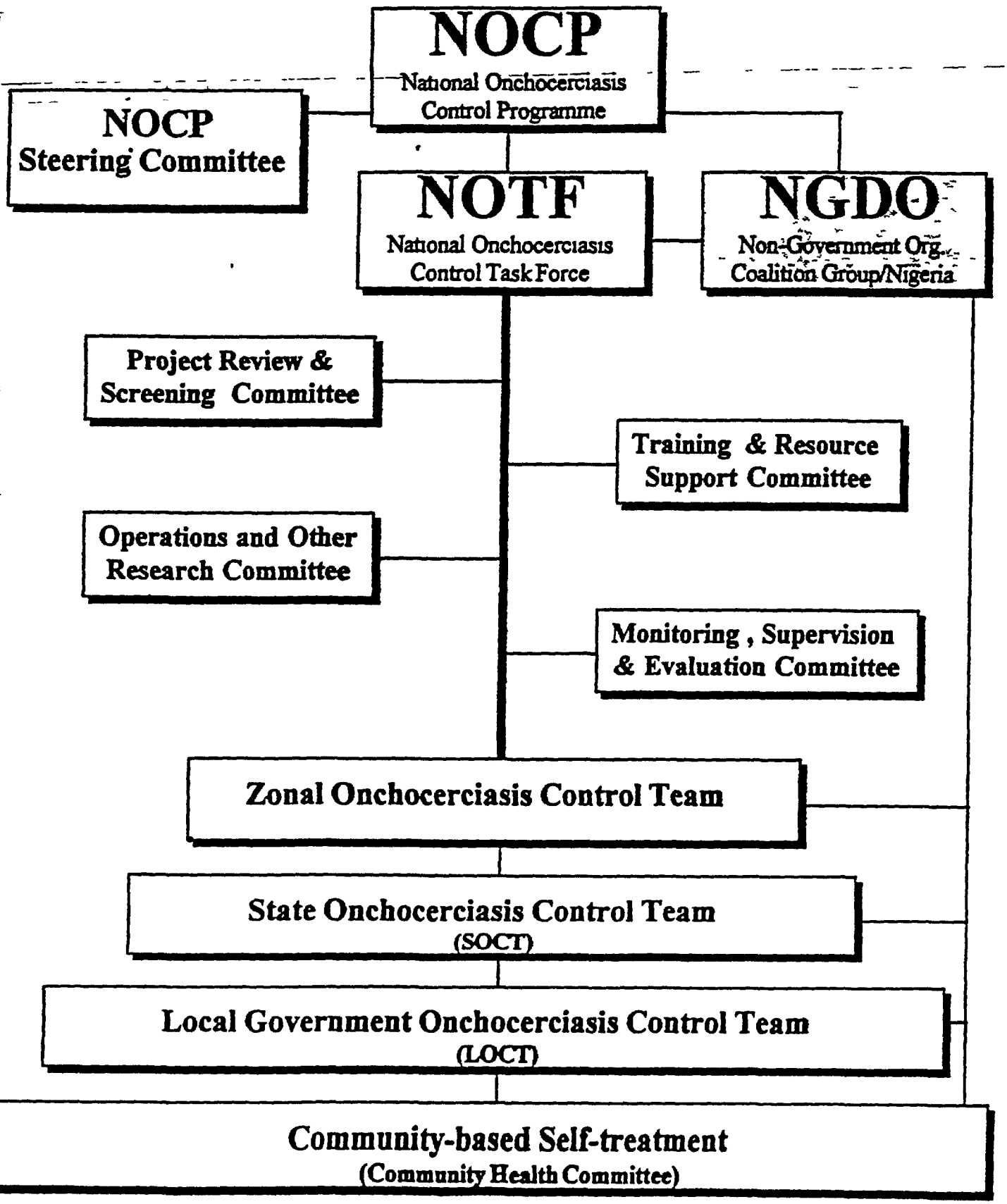
EVENT	DATE	VENUE/ HOST	PARTICIPANTS	PURPOSE
NGDO	January	GRBP National office	26 Rep of NGDOs in IDP	To review the coalition efforts of various NGDOs involved in IDP in Nigeria with a view to strengthening one another for improved performance
NOTF	January	GRBP National office	Officials of NOCP and Reps of NGDOs in IDP	A review of the activities of all IDPs in the country in the past year & setting goals for 1996, including exploring ways of facilitating & coordinating efforts in this direction in 1996
Training for Plateau project	February	GRBP National office		
Training of SPOs	May	GRBP National office	SPOs (6) from all the projects	Refresher training to update their knowledge and improve their capacity to manage IDP in the light of field experience
Africare/GIS training	June	GRBP National office	2 Africare staff members, Country Rep & Programme Specialist	To train Africare/Nigeria Country Rep Mr Tyrone Gaston and MIS/ Programme Specialist, Mr Tom Ubuaine on the use of Geographic Information System in Onchocerciasis programme
APOC Technical Consultative Committee Group & NOTF sub-committee members	June	GRBP National office	Members of APOC Tech & NOCP sub-committee members	A preparatory meeting of the APOC Technical Consultative group and NOCP sub-committee on setting modalities for writing the Draft proposal for Nigeria APOC funding

Symposium on Oncho-cerciasis	June	Lagos	* (See AND) Assistant National Director and 8 SOCT members from 4 projects	The symposium focuse on community self treatment with Ivermec (Mectizan) for Onchocerciasis
Training Review Workshop for SOCTs in all the projects	July	GRBP National office	5 SOCTs - Edo 4 SOCTs - Delta 5 SOCTs - Imo 5 SOCTs - Abia 5 SOCTs - Enugu 5 SOCTs - Anambra 5 SOCTs - Plateau	To review the training given to SOCTs on Mectizan distribution
APOC Workshop	July	GRBP National office	39 Representatives from 4 States	To write APOC proposal on funding of Taraba, Kogi, Ondo and Cross Rivers States for APOC funding starting in 1997
Workshop for Finance officers	July	GRBP National office	7 Finance officers from all the projects, Lagos & National office & Finance Director from Lagos office	To acquaint and train local finance personnel on the new financial reporting as required by The Carter Center The workshop was conducted by Asst. Finance/Admin Director, The Carter Center, Mr Rick Robinson who flew in from Atlanta
1st In-Country management workshop	August	GRBP National office	22 management trainees from different NGDOs and State Onchocerciasis programmes with 3 resource persons from Atlanta along with 3 local trainers	To train local programme managers involved in IDPs in modern management technique of Total Quality Management (TQM) for the purpose of enhancing programme performance & problem solving
Reunion of 1st In-Country management workshop	December	GRBP National office	20 management trainees from different NGDOs & State Oncho Program with 2 Resource persons from Atlanta	Follow up to August workshop, presentation of case-study projects and graduation ceremony

APPENDIX E

Figure 2

Organizational Structure of National Onchocerciasis Control Programme



APPENDIX G

Guia de Utilizacion del Inventario de Comunidades

APPENDIX G.

Onchocerciasis Elimination Program for the Americas

Programa para la Eliminación de la Oncocercosis en las Americas

(OEPA)

Guía de utilización del Inventario de Comunidades

Componente Sistemas de Información

14 calle 3-51 zona 10, Murano Center Of 801
Tel (502-2)666106/9 Guatemala,Guatemala Fax (502-2)666127
email oepa@guate.net

I INTRODUCCION

El presente documento se ha preparado para la revision de los Directores de los Programas Nacionales con el objeto de dar a conocer y uniformar las variables del inventario de comunidades a nivel regional

II ANTECEDENTES

Durante la III Conferencia Interamericana sobre Oncocercosis realizada en Puerto Ayacucho, Estado de Amazonas, Republica de Venezuela, se reunio la fuerza de tarea en Sistemas de Informacion Geograficos Durante el desarrollo de esta reunion se concluvo que era de primordial importancia que se desarrollara un inventario de comunidades a nivel regional, y a nivel de cada pais

Posteriormente, en la IV Conferencia Interamericana sobre Oncocercosis, realizada en Washington, D C se acordo la incorporacion de los sistemas de informacion a la fuerza de tarea de GIS, ampliandose de esta manera el mandato de la fuerza de tarea

En 1995, se promovio un modelo de inventario de comunidades en los paises visitados Durante la V Conferencia Anual sobre Oncocercosis, celebrada en Brasilia, Brasil, se convoco a una mesa redonda sobre los temas de Sistemas de Informacion En esta entre otros temas se presento un modelo de inventario de comunidades que fue comentado por los participantes, y al cual se le hicieron enmiendas

A inicios de este año, en el Taller de Epidemiologia a nivel operativo, que se llevo a cabo en la Ciudad de Esmeraldas, Ecuador se discutieron y acordaron criterios epidemiologicos para uniformizar los datos de los seis programas de la region Aprovechando este momento, se presento a los asistentes el nuevo modelo de inventario de comunidades, el cual sufrio nuevamente modificaciones originadas de la retroalimentacion de los participantes

A raiz de este taller, se decidio modificar el inventario de comunidades, incorporandole variables antropologicas entomologicas, socioeconomicas y de epidemiologia de acuerdo al taller Tambien se decidio presentarlos a los programas nacionales para su consideracion e implementacion dentro de sus programas

III OBJETIVOS

Los objetivos del presente documento son los siguientes

- ✓ Dar a conocer la estructura del archivo regional de inventario de comunidades
- ✓ Conocer la opinion de los Directores de los programas nacionales sobre la estructura del archivo regional

- ✓ Estimular la incorporacion de variables del inventario de comunidades regional a su similar de cada pais

- ✓ Estimular el intercambio de informacion entre los programas nacionales y la oficina regional con el proposito de elaborar mapas tematicos para los programas nacionales, y conocer el grado de avance de sus actividades

- ✓ Presentar variables con definiciones precisas para asegurar la comprension de los directores de los programas nacionales y su posible incorporacion a sus respectivos inventarios de comunidades

- ✓ Tener la oportunidad de observar un panorama global del avance de los programas nacionales a nivel regional por medio de variables uniformes

- ✓ Tener la oportunidad de observar por medio del inventario de comunidades el cambio en la clasificacion epidemiologica de comunidades a traves de los años

IV INVENTARIO DE COMUNIDADES

A continuacion se presenta el modelo de inventario de comunidades a ser utilizado por OEPA y que se propone a los programas nacionales como estructura uniforme regional Para el diseño de este, se clasificaron las variables en distintos grupos siendo estos

- ✓ Clasificacion politico-administrativa de la comunidad
- ✓ Localizacion geografica
- ✓ Datos demograficos
- ✓ Factores de riesgo
  - ambientales
  - socio-economicos
  - entomologicos
  - estratificacion de las comunidades

- ✓ Indicadores epidemiologicos
  - Evaluaciones Epidemiologicas Rapidas (EER o REA)
  - Evaluaciones Epidemiologicas a Profundidad (EEP o IDEA)
  - Evaluaciones Oftalmologicas Rapidas (EORa o ROA)
  - Evaluaciones Entomologicas Rapidas (EenRa o RENTA)

- ✓ Tratamiento con Ivermectina
- ✓ Otras acciones de control
- ✓ Actividades de Educacion para la Salud

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Archivo **INVCOM**

VARIABLE	TIPO	LARGO	DESCRIPCION
ID	Caracteres	04	Codigo de la comunidad
NOMBRE	Caracteres	40	Nombre de la comunidad
MUNICI	Caracteres	04	Codigo del municipio al que pertenece Ver archivo auxiliar *munici*
ESTADO	Caracteres	02	Estado al que pertenece Ver archivo auxiliar *estado*
LAT	Numerico	10 6	Latitud en grados decimales
LON	Numerico	11 6	Longitud en grados decimales
ALTITUD	Numerico	04	Altitud en metros sobre nivel del mar
FUENTE	Numerico	01	Fuente de la localizacion espacial (coordenadas) Consulte archivo *fuente*
POBTOTAL	Numerico	05	Poblacion total de la comunidad
MAYOR15V	Numerico	05	Varones mayores de 15 años
MAYOR15M	Numerico	05	Mujeres mayores de 15 años
MENOR60	Numerico	05	Infantes menores de 5 años
TEMP	Numerico	03 1	Temperatura media anual, grados centigrados
PREPLU	Numerico	04	Precipitacion pluvial anual en milimetros
RIO	Numerico	02	Codigo del rio donde se ubica la comunidad (si se aplica) Ver archivo auxiliar *rio*
OCUPACIONP	Numerico	02	Ocupacion principal en poblacion permanente Consulte el archivo *ocupacio*
OCUPACIONM	Numerico	02	Ocupacion principal en poblacion migrante Consulte el archivo auxiliar *ocupacio*
VECTOR	Numerico	02	Codigo del vector Ver archivo auxiliar *vector*
TIP	Numerico	05 3	Tasa de infeccion parasitaria del vector (TIP)
TIPOCOM	Numerico	01	Tipo de comunidad Ver archivo auxiliar *tipocom*

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VARIABLE	TIPO	LARGO	DESCRIPCION
CMFL	Numerico	05 2	Promedio geometrico comunitario de microfilarias
CASOSNUE	Numerico	05	Casos nuevos en un año
EER	Numerico	01	Evaluacion epidemiologica rapida (EER o REA) realizada. Ver archivo auxiliar *eer*
EEP	Numerico	01	Evaluacion epidemiologica a profundidad (EEP oIDEA) realizada. Ver archivo auxiliar *eep*
EenRA	Numerico	01	Evaluacion entomologia rapida (EenRa o RENTA) realizada Ver archivo auxiliar *eenra*
EORa	Numerico	01	Evaluacion oftalmologica rapida (EORa o ROA) realizada Ver archivo auxiliar *eora*
POBELEG	Numerico	05	Poblacion elegible en la comunidad
POBPOSI	Numerico	05	Poblacion positiva a oncocercosis
POBTOTRA	Numerico	05	Poblacion total tratada
POBELTRA	Numerico	05	Poblacion elegible tratada
POBPEND	Numerico	05	Poblacion pendiente
POBRENEU	Numerico	05	Poblacion renuente
POBAUSEN	Numerico	05	Poblacion ausente
POBMIGRA	Numerico	05	Poblacion migrante
POBMITRA	Numerico	05	Poblacion migrante tratada
NUMTRAT	Numerico	02	Numero acumulado de tratamientos a la fecha
PRIMTRAT	Caracteres	06	Fecha del primer tratamiento
ULTTRAT	Caracteres	06	Fecha del ultimo tratamiento
RONDA	Numerico	01	Numero de ronda de este año
TOTIVER	Numerico	07 1	Cantidad de pastillas de Ivermectina® distribuidas en esta ronda
RXADVERSAS	Numerico	01	Si hubo o no reacciones adversas Ver archivo auxiliar *rxadver*

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VARIABLE	TIPO	LARGO	DESCRIPCION
COMETPOPER	Numerico	02	Composicion etnica de la poblacion permanente Ver archivo auxiliar *cometpo*
COMETPOMIG	Numerico	02	Composicion etnica de la poblacion migrante Ver archivo auxiliar *cometpo*
IDIOMAPER	Numerico	02	Idioma predominante en la poblacion permanente Ver archivo *idioma*
IDIOMAMIG	Numerico	02	Idioma predominante en poblacion migrante Ver archivo *idioma*
VIVIENDA	Numerico	03	Cantidad de viviendas habitadas en la comunidad
ELECTRICO	Numerico	04	Cantidad de viviendas con energia electrica.
AGUAPOTA	Numerico	04	Cantidad de viviendas con agua potable
SERVSALUD	Numerico	02	Servicios de salud disponibles en la comunidad Ver archivo auxiliar *servalud*
ONGS	Numerico	02	Codigo de la ONG que trabaja en la comunidad Ver archivo auxiliar *ong*
ESCUELA	Numerico	01	Si hay escuela en la comunidad Ver archivo auxiliar *escuela*
EXCRETAS	Numerico	03	Viviendas en la comunidad con letrina. excusado o inodoro
ACCESO	Numerico	01	Via principal de acceso Ver archivo auxiliar *acceso*
CAP	Numerico	01	Estudio CAP realizado Ver archivo auxiliar *cap*
AÑO	Numerico	04	Año al que corresponden estos datos

V ARCHIVOS AUXILIARES DEL SISTEMA REGIONAL

A continuacion se presentan las estructuras de los archivos auxiliares que se mencionan en el modelo de inventario de comunidades descrito anteriormente y que forman parte de una base de datos que pretende cubrir todos los aspectos del control de la oncocercosis a nivel nacional y regional En algunos de estos se puede observar que se utilizan las mismas variables, en otros, se pretende que las variables acumulen valores a nivel municipal (canton) o departamental (estado)

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Archivo **MUNICI**

Variable	Tipo	Tamaño	Descripción
PAIS	Numerico	2	Codigo del pais
ESTADO	Numerico	2	Codigo del estado provincia o departamento
MUNICI	Numerico	3	Codigo unico de identificacion del municipio
NOMBRE	Caracteres	40	Nombre oficial del municipio o canton como aparece en la gazetilla geografica del pais
TOTCOM	Numerico	3	Numero total de comunidades en el municipio
TOTCOMEND	Numerico	3	Numero total de comunidades endemicas en el municipio
POBTOTAL	Numerico	5	Poblacion total de todo el municipio
POBELEG	Numerico	5	Poblacion elegible al tratamiento con ivermectina en todo el municipio
POBPOSI	Numerico	5	Poblacion total positiva a oncocercosis
POBTOTRA	Numerico	5	Poblacion total tratada en ultima ronda de Tx
POBELETRA	Numerico	5	Poblacion total elegible tratada en ultima ronda
POBPEND	Numerico	5	Poblacion pendiente de tratamiento en ultima ronda
POBRENUE	Numerico	5	Poblacion renuente al tratamiento en ultima ronda
POBAUSEN	Numerico	5	Poblacion ausente en las comunidades el dia del tratamiento
POBMIGRA	Numerico	5	Poblacion migrante el dia de tratamiento
POBMITRA	Numerico	5	Poblacion migrante tratada en ultima ronda de Tx
CASOSNUE	Numerico	5	Casos nuevos positivos durante el ultimo año
MAYOR15V	Numerico	5	Varones mayores de 15 años de edad
MAYOR15M	Numerico	5	Mujeres mayores de 15 años de edad
MENOR60	Numerico	5	Poblacion de menores de 5 años, ambos generos
COMHIPER	Numerico	3	Numero de comunidades hiperendemicas en el municipio

Variable	Tipo	Tamaño	Descripcion
COMMESO	Numerico	3	Numero de comunidades mesoendemicas en el municipio
COMHIPO	Numerico	3	Numero de comunidades hipoendemicas en el municipio
COMNEG	Numerico	3	Numero de comunidades negativas a oncocercosis en el municipio
COMSOSPE	Numerico	3	Numero de comunidades sospechosas en el municipio

Archivo **ESTADO**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	2	Codigo del pais
ESTADO	Numerico	2	Codigo del estado, provincia o departamento
NOMBRE	Caracteres	20	Nombre del estado, provincia o departamento
NUMUNI	Numerico	3	Numero de municipios que tiene el estado
MUNIENDE	Numerico	3	Numero de municipios endemicos
POBTOTAL	Numerico	5	Poblacion total general del estado/provincia
POBRIESGO	Numerico	5	Poblacion total que habita en los municipios endemicos
POBPOSI	Numerico	5	Poblacion total positiva
AREATOTAL	Numerico	5	Superficie total del estado en Km^2
AREAENDE	Numerico	5	Superficie total endemica en Km^2
AÑO	Numerico	4	Año de recoleccion de la informacion actual

Archivo **RIO**

Variable	Tipo	Tamaño	Descripcion
RIO	Numerico	02	Codigo del rio y llave del archivo
PAIS	Numerico	02	Codigo del pais
ESTADO	Numerico	02	Codigo del estado

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Variable	Tipo	Tamaño	Descripcion
NOMBRE	Caracteres	30	Nombre oficial del rio

Archivo **TIPOCOM**

Variable	Tipo	Tamaño	Descripcion
TIPOCOM	Numerico	1	Codigo del tipo de comunidad y llave del archivo
DESCRIP	Caracteres	40	Descripcion de la comunidad segun su tipo

Archivo **FUENTE**

Variable	Tipo	Tamaño	Descripcion
FUENTE	Numerico	01	Codigo de la fuente de informacion y llave del archivo
NOMBRE	Caracteres	25	Nombre de la fuente de informacion

Archivo **RXADVER**

Variable	Tipo	Tamaño	Descripción
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad
FECHA	Caracteres	06	Fecha de las reacciones adversas (aa/mm/dd)
NOCLA	Numerico	03	Numero de personas con reacciones sin clasificar
LEVE	Numerico	03	Numero de personas con reacciones leves
MODE	Numerico	03	Numero de personas con reacciones moderadas
INTE	Numerico	03	Numero de personas con reacciones intensas

Archivo **COMETPO**

Variable	Tipo	Tamaño	Descripcion
COMETPO	Numerico	01	Codigo de la composicion etnica de la comunidad y llave del archivo
DESCRIP	Caracteres	15	Nombre del grupo etnico predominante

Archivo **IDIOMA**

Variable	Tipo	Tamaño	Descripcion
IDIOMA	Numerico	02	Codigo del idioma predominante en la comunidad y llave del archivo
DESCRIP	Caracteres	15	Idioma predominante en la comunidad

Archivo **OCUPACIO**

Variable	Tipo	Tamaño	Descripción
OCUPACIO	Numerico	01	Codigo de la ocupacion predominante en la comunidad y llave del archivo
DESCRIP	Caracteres	25	Ocupacion predominante en la comunidad

Archivo **SERVSALUD**

Variable	Tipo	Tamaño	Descripción
SERVSALUD	Numerico	01	Codigo del servicio de salud disponible y llave del archivo
DESCRIP	Caracteres	25	Descripcion del servicio de salud disponible

Archivo **ONG**

Variable	Tipo	Tamaño	Descripcion
ONGS	Numerico	02	Codigo de la ONG presente en la comunidad y llave del archivo
NOMBRE	Caracteres	30	Nombre de la Organizacion No Gubernamental en el area de salud presente en la comunidad

Archivo **ESCUELA**

Variable	Tipo	Tamaño	Descripcion
ESCUELA	Numerico	01	Codigo de la escuela y llave del archivo
DESCRIP	Caracteres	15	Descripcion de la escuela de la comunidad

Archivo **ACCESO**

Variable	Tipo	Tamaño	Descripcion
ACCESO	Numerico	01	Codigo del acceso a la comunidad y llave del archivo
DESCRIP	Caracteres	15	Descripcion del acceso a la comunidad

Archivo **CAP**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad donde se hizo el estudio
FECHA	Caracteres	06	Fecha del estudio (año/mes/dia)
POBESTU	Numerico	05	Poblacion participante en el estudio
MAYOR15V	Numerico	05	Varones mayores de 15 años
MAYOR15M	Numerico	05	Mujeres mayores de 15 años
ESCOLAV	Numerico	05 2	Escolaridad en varones
ESCOLAM	Numerico	05 2	Escolaridad en mujeres
CONOCIM1	Caracteres	30	Conocimiento mas importante en la comunidad hacia la oncocercosis
CONOCIM2	Caracteres	30	Segundo conocimiento en importancia
CONOCIM3	Caracteres	30	Tercer conocimiento en importancia
ACTITUD1	Caracteres	30	Actitud mas importante hacia la oncocercosis en la comunidad
ACTITUD2	Caracteres	30	Segunda actitud en importancia reportada
ACTITUD3	Caracteres	30	Tercera actitud en importancia reportada
PRACTICA1	Caracteres	30	Practica mas relevante hacia la enfermedad
PRACTICA2	Caracteres	30	Segunda practica en importancia reportada
PRACTICA3	Caracteres	30	Tercer practica en importancia reportada

Archivo **EER**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad donde se hizo el estudio
FECHA	Caracteres	06	Fecha del estudio (año/mes/dia)
POBPOSI	Numerico	05	Poblacion con resultado positivo por biopsia
POBTOTAL	Numérico	05	Poblacion total de la comunidad
POBEXAM	Numerico	05	Poblacion examinada en la evaluacion
MAYOR15V	Numerico	05	Varones mayores de 15 años
MAYOR15M	Numerico	05	Mujeres mayores de 15 años
MENOR60	Numerico	05	Infantes 0-5años en la comunidad
CASOSNUE	Numerico	05	Numero de casos nuevos en la comunidad
CMFL	Numerico	05 2	Promedio geometrico comunitario de microfilarias
V15POSI	Numerico	05	Varones mavores de 15 años positivos por examen de biopsia de piel
CMFL15V	Numerico	05 2	Promedio geometrico comunitario de microfilarias en varones mavores de 15 años
M15POSI	Numerico	05	Mujeres mayores de 15 años positivas por biopsia
CMFL15M	Numerico	05 2	Promedio geometrico comunitario de microfilarias en mujeres mavores de 15 años
M60POSI	Numerico	05	Niños entre 0 y 5 años de edad con resultado positivo al examen de biopsia de piel
CMFL60M	Numerico	05 2	Promedio geometrico comunitario de microfilarias en niños entre 0 y 5 años de edad

Archivo **EEP**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad donde se hizo el estudio

Variable	Tipo	Tamaño	Descripcion
FECHA	Caracteres	06	Fecha del estudio (año/mes/dia)
POBPOSI	Numerico	05	Poblacion con resultado positivo por biopsia
POBTOTAL	Numerico	05	Poblacion total de la comunidad
POBEXAM	Numerico	05	Poblacion examinada en la evaluacion
MAYOR15V	Numerico	05	Varones mayores de 15 años
MAYOR15M	Numerico	05	Mujeres mayores de 15 años
MENOR60	Numerico	05	Infantes 0-5años ambos generos en la comunidad
CASOSNUE	Numerico	05	Numero de casos nuevos en la comunidad
CMFL	Numerico	05 2	Promedio geometrico comunitario de microfilarias
V15POSI	Numerico	05	Varones mayores de 15 años positivos al examen de biopsia de piel
CMFL15V	Numerico	05 2	Promedio geometrico comunitario de microfilarias en varones mayores de 15 años
M15POSI	Numerico	05	Mujeres mayores de 15 años positivas por biopsia
CMFL15M	Numerico	05 2	Promedio geometrico comunitario de microfilarias en mujeres mayores de 15 años
M60POSI	Numerico	05	Niños con resultado positivo al examen de biopsia de piel
CMFL60M	Numerico	05 2	Promedio geometrico comunitario de microfilarias en niños menores de 5 años

Archivo **EenRa**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad donde se hizo el estudio
FECHA	Caracteres	06	Fecha del estudio (año/mes/dia)
EPOCALTA	Caracteres	04	Meses de mayor transmision

Variable	Tipo	Tamaño	Descripcion
EPOCBAJA	Caracteres	04	Meses de baja transmision
ESPECIE1	Numerico	02	Especie de mayor transmision en la comunidad
ESPECIE2	Numerico	02	2ª especie presente en la comunidad
ESPECIE3	Numerico	02	3ª especie presente en la comunidad
ESPECIE4	Numerico	02	4ª especie presente en la comunidad
VUELO1	Numerico	02	Rango de vuelo del principal vector
PICADA1	Numerico	04	Grado de antropofilia del principal vector
ATP	Numerico	04	Potencial anual de transmision
TIP	Numerico	04	Tasa de infeccion parasitaria
COLECTA	Numerico	02	Cantidad de simulidos colectados
NULIPAR	Numerico	02	Cantidad de simulidos nuliparas colectados

Archivo **EORa**

Variable	Tipo	Tamaño	Descripcion
PAIS	Numerico	02	Codigo del pais
ID	Caracteres	04	Codigo de la comunidad donde se hizo el estudio
FECHA	Caracteres	06	Fecha del estudio (año/mes/dia)
POBTOTAL	Numerico	05	Poblacion total de la comunidad
POBEXAM	Numerico	05	Poblacion participante en la evaluacion
AVOD0	Numerico	03	Resultado agudeza visual ojo derecho tipo 0
AVOI0	Numerico	03	Resultado agudeza visual ojo izquierdo tipo 0
AVOD1	Numerico	03	Resultado agudeza visual ojo derecho, tipo 1
AVOI1	Numerico	03	Resultado agudeza visual ojo izquierdo tipo 1
AVOD2	Numerico	03	Resultado agudeza visual ojo derecho, tipo 2
AVOI2	Numerico	03	Resultado agudeza visual ojo izquierdo tipo 2
AVOD3	Numerico	03	Resultado agudeza visual ojo derecho, tipo 3

Variable	Tipo	Tamaño	Descripcion
AVOI3	Numerico	03	Resultado agudeza visual ojo izquierdo tipo 3
QPOD0	Numerico	03	Resultado queratitis punteada ojo derecho, tipo 0
QPOI0	Numerico	03	Resultado queratitis punteada ojo izquierdo tipo 0
QPOD1	Numerico	03	Resultado queratitis punteada ojo derecho, tipo 1
QPOI1	Numerico	03	Resultado queratitis punteada ojo izquierdo tipo 1
QPOD2	Numerico	03	Resultado queratitis punteada ojo derecho, tipo 2
QPOI2	Numerico	03	Resultado queratitis punteada ojo izquierdo tipo 2
MFCAODN	Numerico	03	No hay mf en camara anterior ojo derecho
MFCAOIN	Numerico	03	No hay mf en camara anterior ojo izquierdo
MFCAODP	Numerico	03	Presencia de mf en camara anterior ojo derecho
MFCAOIN	Numerico	03	Presencia de mf en camara anterior ojo izquierdo
QEOD0	Numerico	03	Queratitis esclerosante ausente en ojo derecho
QEOI0	Numerico	03	Queratitis esclerosante ausente en ojo izquierdo
QEOD1	Numerico	03	Queratitis esclerosante grado 1, ojo derecho
QEOI1	Numerico	03	Queratitis esclerosante grado 1, ojo izquierdo
QEOD2	Numerico	03	Queratitis esclerosante grado 2, ojo derecho
QEOI2	Numerico	03	Queratitis esclerosante grado 2, ojo izquierdo
QEOD3	Numerico	03	Queratitis esclerosante grado 3, ojo derecho
QEOI3	Numerico	03	Queratitis esclerosante grado 3, ojo izquierdo
IRIDOD0	Numerico	03	Iridociclitis ausente en ojo derecho
IRIDOI0	Numerico	03	Iridociclitis ausente en ojo izquierdo
IRIDOD1	Numerico	03	Iridociclitis activa en ojo derecho
IRIDOI1	Numerico	03	Iridociclitis activa en ojo izquierdo
IRIDOD2	Numerico	03	Iridociclitis secuela en ojo derecho
IRIDOI2	Numerico	03	Iridociclitis secuela en ojo izquierdo

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Variable	Tipo	Tamaño	Descripción
IRIDOD3	Numerico	03	Iridociclitis secuela y activa en ojo derecho
IRIDOI3	Numerico	03	Iridociclitis secuela y activa en ojo izquierdo
CATAOD0	Numerico	03	Ausencia de cataratas en ojo derecho
CATAOI0	Numerico	03	Ausencia de cataratas en ojo izquierdo
CATAOD1	Numerico	03	Cataratas en ojo derecho, no obstruye
CATAOI1	Numerico	03	Cataratas en ojo izquierdo, no obstruye
CATAOD2	Numerico	03	Cataratas en ojo derecho, si obstuye
CATAOI2	Numerico	03	Cataratas en ojo izquierdo, si obstuve
COREOD0	Numerico	03	Corioretinitis normal, ojo derecho
COREOI0	Numerico	03	Corioretinitis normal, ojo izquierdo
COREOD1	Numerico	03	Corioretinitis moteado, ojo derecho
COREOI1	Numerico	03	Corioretinitis moteado, ojo izquierdo
COREOD2	Numerico	03	Corioretinitis grado 1, ojo derecho
COREOI2	Numerico	03	Corioretinitis grado 2, ojo izquierdo
COREOD3	Numerico	03	Corioretinitis grado 2, ojo derecho
COREOI3	Numerico	03	Corioretinitis grado 2, ojo izquierdo
COREOD4	Numerico	03	Corioretinitis grado 3, ojo derecho
COREOID4	Numerico	03	Corioretinitis grado 3, ojo izquierdo
NEROPOD0	Numerico	03	Nervio optico normal, ojo derecho
NEROPOI0	Numerico	03	Nervio optico normal ojo izquierdo
NEROPOD1	Numerico	03	Nervio optico grado 1, ojo derecho
NEROPOI1	Numerico	03	Nervio optico grado 1, ojo izquierdo
NEROPOD2	Numerico	03	Nervio optico grado 2, ojo derecho
NEROPOI2	Numerico	03	Nervio optico grado 2, ojo izquierdo
NEROPOD3	Numerico	03	Nervio optico grado 3, ojo derecho

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Variable	Tipo	Tamaño	Descripcion
NEROPOI3	Numerico	03	Nervio optico grado 3, ojo izquierdo
NEROPOD4	Numerico	03	Nervio optico grado 4, ojo derecho
NEROPOI4	Numerico	03	Nervio optico grado 4, ojo izquierdo

VI GLOSARIO DE VARIABLES UTILIZADAS

A continuacion se presenta un glosario de las variables utilizadas en los archivos definidos en la seccion anterior Para evitar redundancia, se definen las variables una sola vez, comenzando con el archivo INVCOM, archivo del inventario de comunidades y posteriormente del resto de archivos Como fuente de estas variables se distintos documentos que aparecen en la bibliografía

ID — Codigo unico de identificacion de cada comunidad Es conveniente que este codigo no se repita Si la comunidad desaparece mantiene este codigo y no se le asigna a ninguna otra comunidad Esta es la llave principal del archivo

NOMBRE — Este es el nombre oficial de la comunidad segun aparece en listados de los Institutos de Cartografía y Estadistica a nivel nacional Este nombre se ingresa en letras mayusculas Si se trata de una finca se ingresa el termino finca antecediendo el nombre

MUNICI — Corresponde al codigo del municipio, prefectura o canton al cual pertenece la comunidad endemica Este codigo hace referencia a un archivo auxiliar, *MUNICI,* en el cual se acumulan valores de todas las comunidades (localidades) que lo forman

ESTADO — Corresponde al codigo del departamento, estado o provincia al cual pertenece la comunidad Este codigo hace referencia a un archivo auxiliar, *ESTADO*, en el cual se acumulan valores de todos los municipios o cantones que lo forman

LAT — Se refiere a la latitud respecto al Ecuador, en grados decimales, donde esta ubicada la comunidad La latitud en la mayoria de casos se sobre entiende sera medida en grados norte (por estar ubicados en el Hemisferio Norte)

Para convertir una latitud expresada en grados, minutos y segundos a grados decimales, se dividen los segundos entre 3600, los grados dentro de 60, y se suman los productos entre si A este numero fraccionario se le suma el valor absoluto de la cifra en grados El resultado es el equivalente en grados decimales

LON — Se refiere a la longitud, en grados decimales de la ubicacion de la comunidad

Debido a que el continente esta al oeste del meridiano de Greenwich, las lecturas convertidas a decimal deberan multiplicarse por -1 La lectura resultante estai expresada en grados Oeste

ALTITUD Cifra que corresponde a la altitud de la comunidad expresada en metros sobre el nive del mar

FUENTE Representa el codigo de la fuente de informacion de la ubicacion espacial de ' comunidad (coordenadas) Es la llave principal del archivo *FUENTE* Las posibles fuentes de informacion son

0 Mapa en papel
1 Gazetilla geografica
2 Atlas Geografico
3 Estimado (se estima en mapa en papel y luego se digitaliza. o se estima directamente en pantalla por no tener otra fuente de informacion)
9 GPS Lectura tomada por medio de unidad de georeferenciacion

POBTOTAL Poblacion total de la comunidad segun censo del Instituto Nacional de Estadística del Pais, o segun los censos levantados por el programa en las rondas de distribucion de Ivermectina®

MAYOR15V Esta variable corresponde al grupo indicador de varones mayores de 15 años de edad que residen en la comunidad

MAYOR15M Esta variable corresponde al grupo de mujeres mayores de 15 años de edad que residen en la comunidad Por sugerencia de los programas de Guatemala y Venezuela. se considera que la inclusion de mujeres mavores de 15 años en conjunto con el grupo indicador de varones representa un mayor aproximacion a la realidad

MENOR60 En esta variable se registra la cantidad de infantes de ambos generos, menores de 5 años de edad Se estima que en la gran mayoria de los casos, este grupo cumple el criterio de inelegibilidad de peso menor de 15 kilogramos Este grupo poblacional representa un indicador de incidencia util en las evaluaciones posteriores de impacto

TEMP En esta variable se registra la temperatura media anual de la comunidad Esta temperatura se representa en grados Centigrados Este dato se obtiene usualmente de los Institutos Meteorologicos Nacionales Si este dato lo obtiene en grados Farhenheit para convertirlo a Centigrados use la siguiente ecuacion

$$C = \frac{5}{9} (F - 32)$$

Donde
C son grados Centigrados
F son grados Farhenheit

PREPLU Representa la precipitacion pluvial media de la comunidad en milimetros Este dato tambien se obtiene usualmente el los Institutos Meteorologicos Nacionales

RIO Corresponde al codigo del rio donde se ubica la comunidad Dado que en algunos de los paises de la region las comunidades endemicas se ubican en las proximidades inmediatas de los rios, se incluye esta variable para facilitar la ubicacion de estas Es la llave principal del archivo *RIO*

OCUPACIONP Corresponde al codigo de la ocupacion principal de la poblacion permanente de la comunidad Esta variable se valida con el archivo de referencia *ocupacion*, que ya tiene asignados algunas ocupaciones que se mencionan a continuación En caso necesite ingresar alguna que no se encuentre registrada por favor hagalo antes del ingreso de datos de la comunidad

Codigo	**Descripcion**
01	Agricultor
02	Pescador
03	Artesano
04	Militar
05	Cazador

OCUPACIONM Representa el codigo de la ocupacion principal de la poblacion migrante de la comunidad Utilize el archivo *ocupacion*

VECTOR Se ingresa en este campo el codigo del vector predominante en la transmision de la oncocercosis en la comunidad Se utiliza la siguiente tabla

codigo	**vector**
01	Simulium *ochraceum*
02	Simulium *exiguum*
03	Simulium *metallicum*

04	Simulium *oyapockense*
05	Simulium *guianense*
06	Simulium *incrustata*

De existir mas vectores responsables de la transmision de Onchocerca *volvulus*, por favor ingrese el codigo y nombre del vector, y comuniquelo a OEPA

TIP

En esta variable se almacena el valor de la tasa de infeccion parasitaria del vector transmisor en la comunidad El TIP es igual a la suma de todas las moscas con larvas en estadios L1, L2 y L3 dividido entre el numero total de moscas disectadas

$$TIP = \frac{L_1 + L_2 + L_3}{Numero\ de\ moscas\ disectadas} \times 100$$

TIPOCOM

Codigo del tipo de comunidad en el cual esta clasificada la comunidad Hace referencia al archivo *TIPOCOM* Las comunidades se clasifican en

0 No Endemica o Negativa por evaluacion
1 Sospechosa de tener casos
2 No Sospechosa de tener casos
3 Endemica Conocida (casos positivos)
4 Se desconoce el estado endemico de la comunidad, esta pendiente de evaluacion
9 Comunidad Centinela

CMFL

Esta variable representa el valor de la promedio geometrico comunitario de microfilarias en el grupo indicador de varones mayores de 15 años, segun resultados obtenidos de examen de biopsia de piel La formula a utilizar corresponde al promedio geometrico del numero de microfilarias encontradas en biopsia de piel del numero total de biopsias de piel en varones examinados en la comunidad Esta formula se muestra a continuacion

$$CMFL = e^{\left[\frac{\sum_{I=1}^{N} \left[\frac{\sum_{i=1}^{n} \ln\{C_i + 1\}}{n_I} \right]}{N} \right]} - 1$$

donde

C_I Numero de microfilarias I de cada biopsia de piel
n_I Numero de biopsias I de cada individuo (generalmente son dos)
N Numero total de individuos

ex Antilogaritmo natural
ln Logaritmo natural

CASOSNUE En esta variable debe registrarse el numero de casos nuevos encontrados en la comunidad desde el inicio del año

EER Esta variable se utiliza para enlazar al archivo *EER*, en el cual se guarda informacion relevante a evaluacion epidemiologica rapida (EER o REA) realizada en la comunidad En caso no se ha realizado ninguna evaluacion, en esta variable se ingresa un 0 (numero cero), en caso si hay evaluacion epidemiologica se ingresa un 1 (numero uno)

EEP Esta variable se utiliza para indicar si en la comunidad se han realizado Evaluaciones Epidemiologicas a Profundidad EEP o IDEA, En caso negativo se ingresa un 0 (numero cero) en esta variable, en caso positivo se ingresa un 1 (numero 1) Tambien sirve de enlace con el archivo del mismo nombre *EEP*, donde se registran los resultados de esta evaluacion

EenRA De haberse realizado evaluaciones entomologicas rapidas (EenRA o RENTA), se ingresa un numero uno (1) en esta variable, la cual enlaza al archivo *EenRA* Si no se han efectuado evaluaciones entomologicas en esta comunidad, se ingresa cero (0)

EORa Para aquellas comunidades en las que no se han realizado evaluaciones oftalmologicas rapidas (EORa o ROA), se ingresa un cero (0), en aquellas en las que si se han hecho estas evaluaciones, se ingresa un numero uno (1) Esta variable enlaza con el archivo *EORa*, con datos sobre estas evaluaciones

POBELEG En esta variable se registra la poblacion elegible de la comunidad Esta corresponde a la poblacion residente en la comunidad a la cual se le puede administrar Ivermectina® con toda seguridad La poblacion elegible es igual a la poblacion total menos la poblacion no elegible de la comunidad

De acuerdo a las recomendaciones del Comite de Expertos de Mectizan®, se entiende por **poblacion no elegible** a la poblacion afecta a los siguientes criterios
a) Personas con peso menor de 15 kilogramos (33 libras)
b) Mujeres en estado de gestacion
c) Mujeres en su primer semana de lactancia
d) Personas que presentan enfermedades caquecticas o debilitantes

POBPOSI Es la poblacion de la comunidad positiva a oncocercosis por cualquiera de los siguientes examenes biopsia de piel, presencia de nodulos, o por evaluacion oftalmologica

POBTOTRA Corresponde a la poblacion total tratada con ivermectina en la ultima ronda d tratamiento realizada en la comunidad

POBELTRA Corresponde a la poblacion elegible tratada con ivermectina en la ultima ronda tratamiento realizada en la comunidad

POBPEND Es la poblacion de la comunidad que quedo pendiente de tratamiento durante ultima ronda de tratamiento Entre las razones por las que hay poblacion pendiente se pueden mencionar las siguientes
a) Mujeres en estado de gestacion
b) Personas que el dia (o dias) de tratamiento en la comunidad estaban sufriendo de alguna enfermedad interrecurrente o debilitante
c) Mujeres que estaban en la primer semana de lactancia

POBRENUE Es la poblacion de la comunidad que rechazo el tratamiento con ivermectina durant la ultima ronda de tratamiento

POBAUSEN Esta cifra corresponde a la poblacion que estuvo ausente en la comunidad el dia (o dias) de tratamiento con ivermectina, sin embargo, esta poblacion tiene su domicilio en la comunidad y no se pueden considerar como emigrantes

POBMIGRA Es la poblacion migrante (trabajadores estacionales) que se encontraba en la comunidad durante la ultima ronda de tratamiento con ivermectina Debido a que estan expuestos al riesgo de contraer la enfermedad, se deben registrar

POBMITRA Es la cantidad de personas migrantes (trabajadores estacionales) que fueron tratadas con ivermectina durante la ultima ronda de tratamiento en la comunidad Como se menciono anteriormente, este es un grupo que por encontrarse en comunidades expuestas a contraer la enfermedad, deben medicarse y registrarse

NUMTRAT Esta cifra representa el numero acumulativo de tratamientos que se han dado en la comunidad No importa si estos tratamientos no se han dado consecutivos

PRIMTRAT Es la fecha del primer tratamiento que se dio en la comunidad, independientemente que los siguientes tratamientos han sido o no consecutivos Se sugiere registrar de la siguiente forma año/mes/dia, ocupando dos digitos por cada uno para hacer un total de seis caracteres

RONDA Es el numero del tratamiento con Ivermectina® que se ha realizado en la comunidad durante el presente año Si se administra Ivermectina® cada seis meses en un año pueden haber unicamente dos rondas, 1 y 2

ULTTRAT Es la fecha del ultimo tratamiento realizado en la comunidad Se sugiere registrar de

la siguiente forma año/mes/dia, ocupando dos digitos por cada uno para hacer un total de seis caracteres

TOTIVER En esta variable se registra la cantidad de pastillas de ivermectina distribuidas en la comunidad durante la ultima ronda de tratamiento Para alcanzar esta cifra sumamos la cantidad de pastillas administradas por persona en toda la comunidad

RXADVER En esta variable se ingresa la siguiente informacion
0 Si durante la ultima ronda de tratamiento no hubo reacciones adversas originadas por la administracion de ivermectina
1 Si durante la ultima ronda de tratamiento hubo reacciones adversas originadas por la administracion de ivermectina.
Esta variable sirve de enlace con un archivo auxiliar *(RXADVER)* donde se registran la cantidad de reacciones adversas, clasificadas por su intensidad, durante las rondas de tratamiento

COMETPOPER Esta variable de dos caractereses de longitud, se utilizara para registrar el codigo del grupo etnico predominante en la poblacion permanente de la comunidad Existe un archivo, *COMETPO*, en el cual se registran los grupos etnicos predominantes en la region endemica. Estos codigo sirven para validar esta variable al momento del ingreso de datos

COMETPOMIG En esta variable se registra el codigo del grupo etnico predominante en la poblacion migrante que se encuentra en la comunidad Por favor refierase al archivo *COMETPO* para conocer los codigos de los grupos etnicos existentes Es recomendable que se ingrese primero los grupos etnicos antes del inicio del ingreso de datos

IDIOMAPER Es el codigo del idioma predominante de la poblacion permanente de la comunidad Esta variable se valida con el archivo *idioma* donde se pueden encontrar las descripciones de los distintos idioma que se hablan en la region endemica Algunos de estos son

0 Ninguno predominante
1 Castellano
2 Portugues
3 K'akchiquel
4 Tzutuhil
5 Mam
6 Pocomam
7 Yanomami
8 Yekuana
9 Chachi

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IDIOMAMIG Es el codigo del idioma predominante de la poblacion migrante de la comunidad Refierease al archivo *idioma* para validar los codigo

VIVIENDA En esta variable se registra la cantidad de viviendas habitadas que hay en la comunidad El contenido de la variable tambien se puede utilizar como una forma de control si ya se ha determinado en al pais o region el promedio de habitantes por vivienda Por ejemplo si en la comunidad existen 40 viviendas y su promedio de habitantes por vivienda es 5 3, hay aproximadamente 210 habitantes en la comunidad

ELECTRICO Se debe registrar en esta variable la cantidad de viviendas de la comunidad con servicio de energia eléctrica

AGUAPOTA En esta variable se registra la cantidad de viviendas de la comunidad con servicio de agua potable

SERVSALUD Usualmente hay algun tipo de servicio de salud en la comunidad En esta variable se registra el tipo de servicio de salud disponible en la comunidad Esta es la llave del archivo *SERVSALUD*, donde se registran los tipos de servicio de salud Estos se encuentran clasificados de la siguiente manera

0 No hay ningun tipo de servicio de salud disponible en la comunidad
1 Puesto de salud (operado por pasantes o voluntarios)
2 Centro de salud (abierto 8 horas 5 veces por semana)
3 Clinica medica (presencia de un profesional de la medicina)
4 Botiquin comunitario (se cuenta con un botiquin en casa de un voluntario)
5 Hospital

De existir algun otro tipo de servicio no contemplado en este archivo, se debe ingresar al archivo *servsalud* De existir mas de un servicio de salud disponible en la comunidad registrese aquel que este mejor equipado en recursos humanos y materiales y al cual tenga acceso la mayor cantidad de poblacion que puede verse afectada por reacciones secundarias ocasionadas por la ingesta de ivermectina

ONGS En esta variable se registra el codigo de la Organizacion no gubernamental que trabaja en la comunidad en el area de salud Los codigos registrados hasta el momento son

0 No hay ninguna ONG trabajando en la comunidad
1 Vicariato Catolico de Esmeraldas
2 Christopher Blinden Mission
3 Asociacion Nacional del Cafe
4 AgroSalud
5 CIDEIM
6 CIMDER

En caso no esta ingresada la ONG en el archivo ONGS por favor ingreselo antes de ingresar datos de distribucion

ESCUELA Aqui se debe ingresar si existe o no una escuela que este en funcionamiento en la comunidad En caso exista una escuela en funcionamiento se ingresa en esta variable el valor 1 (numero uno) Si no hay escuela en la comunidad, entonces se ingresa el valor 0 (numero cero) En la variable DESCRIP del archivo auxiliar *ESCUELA* se ingresa el tipo de escuela (primaria,secundaria,vocacional) El codigo a utilizar es el siguiente

0 No existe escuela
1 Existe escuela

EXCRETAS Cantidad de viviendas en la comunidad que cuenta con un servicio sanitario (water closet) para la disposicion de excretas

ACCESO Corresponde al codigo de los distintos medios de acceso a la comunidad Los medios registrados en el archivo *ACCESO* son los siguientes

0 por vereda estacional
1 por vereda permanente
2 por carretera asfaltada
3 por camino de tierra
4 por via fluvial
5 por via aerea

CAP Se utiliza esta variable para registrar si han habido estudios de Conocimientos, Actitudes y Practicas en la comunidad, y el resultado de estos Si se han efectuado estudios CAP se ingresa un 1 (numero uno), en caso negativo, se ingresa un 0 (numero cero) Esta variable se utiliza para enlazar al archivo *CAP*, en el cual se almacenan los resultados del estudio efectuado en la comunidad

AÑO Es el año calendario al que corresponden estos datos Se ingresan las cuatro cifras el año (1994, 1996, etc)

Variables utilizadas en otros archivos

PAIS En esta variable se registra el codigo de dos digitos asignados a los paises endemicos de America Tambien enlaza con el archivo del mismo nombre *PAIS*, el cual contiene datos relevantes a cada programa nacional Los codigos asignados a los paises, en orden alfabetico son

Codigo	**Pais**

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01	Republica Federativa de Brasil
02	Republica de Colombia
03	Republica del Ecuador
04	Republica de Guatemala
05	Estados Unidos Mexicanos
06	Republica de Venezuela

TOTCOM Representa al numero total de comunidades que hay en un municipio Es una variable de tres digitos

TOTCOMEND Variable de tres dígitos que representa el numero total de comunidades endemicas que hay en un municipio

COMHIPER En esta variable de tres digitos se ingresa la cantidad de comunidades hiperendemicas que hay en el municipio Una comunidad oncocercosa con un nivel endemico igual o superior al 60% de su poblacion se clasifica como hiperendemica

COMMESO En esta variable de tres digitos se ingresa la cantidad de comunidades mesoendemicas que hay en el municipio Una comunidad se considera mesonendemica si el nivel endemico de oncocercosis esta entre el 21% y el 59% de la poblacion

COMHIPO En esta variable de tres digitos se ingresa la cantidad de comunidades hipoendemicas que hay en el municipio Para clasificar una comunidad oncocercosa como hipoendemica debe tener un nivel de endemicidad menor o igual al 20% de su poblacion

COMNEG Se refiere a la cantidad de comunidades negativas que hay en un municipio Las comunidades negativas son aquellas donde se ha comprobado que **No** hay casos positivos a oncocercosis

COMSOSPE Son aquellas comunidades de un municipio que se consideran sospechosas de tener casos positivos de oncocercosis por estar cerca de un criadero conocido, por estar dentro del rango de vuelo del vector predominante en la transmision de oncocercosis por la altitud en que se encuentra, por otros factores ecologicos o economicos

NUMUNI Representa el numero total de municipios del Departamento, Estado o Provincia

MUNIENDE Corresponde a la cantidad total de municipios endemicos que hay en un

Departamento, Estado o Provincia, independientemente del grado de endemicidad de las comunidades que se encuentren en el municipio

POBRIESGO En esta variable se registra la suma de poblacion total de las comunidades de los municipios endemicos de todo el Departamento, Estado, o Provincia

AREATOTAL Se refiere al area total en kilometros cuadrados de un Departamento, Estado o Provincia

AREAENDE Se refiere al total en kilometros cuadrados que ocupa el area endemica de un Departamento, Estado o Provincia

DESCRIP En esta variable es de multiple proposito, y se utiliza para registrar descripciones, sean estas de tipos de comunidades (no endemica, endemica), del idioma o grupo etnico predominante en la comunidad, y de otros archivos

FECHA Corresponde a la fecha en que ocurrieron las reacciones adversas registradas en una comunidad, posterior al tratamiento con Ivermectina® La fecha se sugiere se registre en el formato año/mes/dia, utilizando dos caracteres para representar cada año, mes, y dia de la fecha

NOCLA Se refiere a la cantidad de reacciones adversas cuya intensidad no pudo ser clasificada

LEVE Se refiere a la cantidad de reacciones adversas catalogadas como leves ocasionadas por la ingesta de Ivermectina® en la comunidad

MODE Se refiere a la cantidad de reacciones adversas catalogadas como moderadas por la ingesta de Ivermectina® en la comunidad

INTE Se refiere a la cantidad de reacciones adversas catalogadas como intensas por la ingesta de Ivermectina® en la comunidad

IDIOMA Se refiere al codigo asignado al idioma predominante en la comunidad Esta variable se valida con el archivo *idioma* Se presentan a continuacion algunos de los idiomas utilizados en la region

0 Ninguno predominante
1 Castellano
2 Portugues
3 K'akchiquel
4 Tzutuhil
5 Mam

6 Pocomam
7 Yanomami
8 Yekuana
9 Chachi

POBESTU Se registra la poblacion participante en el estudio de Conocimientos, A Practicas

ESCOLAV Esta variable corresponde a la escolaridad de los varones en la comunida

ESCOLAM En esta variable se registra la escolaridad de las mujeres de la comunidad

CONOCIM1 En esta variable se registra el conocimiento mas relevante que se ti oncocercosis a nivel de la poblacion de acuerdo a los resultados del estudio

CONOCIM2 Registre en esta variable el segundo conocimiento en importancia que comunidad sobre la oncocercosis de acuerdo a los resultados del estudio CA

CONOCIM3 Registre en esta variable el tercer conocimiento en importancia que ti comunidad sobre la oncocercosis de acuerdo a los resultados del estudio CA

ACTITUD1 Se registra en esta variable la actitud principal que tiene la comunidad con res a la oncocercosis

ACTITUD2 Se registra en esta variable la segunda actitud principal que tiene la comunida respecto a la oncocercosis

ACTITUD3 Se registra en esta variable la tercer actitud principal que tiene la comunida respecto a la oncocercosis

PRACTICA1 En esta variable se registra la practica principal de la comunidad con respect oncocercosis, que reporta el estudio CAP

PRACTICA2 En esta variable se registra la segunda practica en importancia de la comunidad respecto a la oncocercosis que reporta el estudio CAP

PRACTICA3 En esta variable se registra la tercer practica en importancia de la comunidad respecto a la oncocercosis, que reporta el estudio CAP

POBEXAM Representa la poblacion total examinada en un tipo de evaluacion, epidemiologica oftalmologica o entomologica

V15POSI Corresponde a la cantidad de varones mayores de 15 años de edad (grupo indicad

con resultado positivo a la biopsia de piel en la evaluacion epidemiologica practicada en la comunidad

M15POSI Corresponde a la cantidad de mujeres mayores de 15 años de edad (grupo indicador) con resultado positivo a la biopsia de piel en la evaluacion epidemiologica practicada en la comunidad

M60POSI Corresponde a la cantidad de infantes de ambos generos menores de 5 años de edad (grupo indicador) con resultado positivo a la biopsia de piel en la evaluacion epidemiologica practicada en la comunidad

CMFL15V Registre en esta variable el promedio geometrico comunitario de microfilarias encontradas en el grupo indicador de varones mayores de 15 años en la comunidad

CMFL15M Registre en esta variable el promedio geometrico comunitario de microfilarias encontradas en el grupo de mujeres mayores de 15 años en la comunidad

CMFL60M Registre en esta variable el promedio geometrico comunitario de microfilarias encontradas en el grupo de infantes menores de 5 años de edad en la comunidad

EPOCALTA Se utiliza para ingresar los meses en los que se ha observado mayor transmision de parte del vector Los primeros dos caracteres de la variable indican el numero del mes en que inicia la temporara de mayor transmision y los siguientes dos el numero del mes en que esta finaliza. Ejemplo 1003 indica que la temporada de transmision alta inicia en octubre (10) y termina en marzo (03)

EPOCBAJA En esta variable se registra el numero de los meses en los que se ha observado una transmision baja de parte del vector Los primeros dos caracteres representan el numero del mes donde inicia la temporada de transmision baja, y los siguientes dos el numero del mes donde termina Ejemplo 0410 indica que en el mes de abril (04) inicia la temporada de transmision baja, y termina en octubre (10)

ESPECIE1 Registre en esta variable el codigo correspondiente a la especie responsable de la mayor transmision de oncocercosis en la comunidad

ESPECIE2 Registre en esta variable el codigo correspondiente a la segunda especie responsable de la transmision de oncocercosis en la comunidad

ESPECIE3 Registre en esta variable el codigo correspondiente a la tercera especie responsable de la transmision de oncocercosis en la comunidad, si la hay

ESPECIE4 Registre en esta variable el codigo correspondiente a la cuarta especie responsable de la transmision de oncocercosis en la comunidad, si la hay

VUELO1 Esta variable corresponde al rango de vuelo en kilometros del principal v involucrado en la transmision de oncocercosis en la comunidad

ATP Corresponde al potencial de transmision anual de oncocercosis en la comunida ATP es el numero estimado de larvas de *Onchocerca volvulus* que recibe individuo expuesto a la picadura del vector durante todo el dia (11 horas), todo dias del año Este se calcula de la siguiente forma

ATP= Numero de moscas picando **X** porcentaje de moscas con larvas metacicli (L_3) **X** Media de larvas por mosca

PICADA1 En esta variable se ingresa el grado de antropofilia del principal vector e transmision de oncocercosis en la comunidad El grado de antropofilia corresponc a la cantidad de "picaduras" que hace el vector en un cebo humano en un dia

Archivo EORA

Este es el archivo que contiene los datos sobre las evaluaciones oftalmologicas rapi (EORa o ROA) que se han efectuado en las comunidades endemicas Para el diseño de este archiv se utilizo como base el documento "Evaluacion Oftalmologica de la Oncocercosis en las Ameri Memorias del Taller de Evaluacion Oftalmologica Antigua (Guatemala) del 13 al 16 de julio 1992" Las variables utilizadas en este archivo solo pueden tener de numeros enteros positivos cero (0), por lo que aunque extenso su llenado es sencillo Cada variable representa la cantidad personas examinadas en la comunidad que tienen determinada lesion ocular (estado patologico) e distinto grado, en el ojo derecho, OD, o en el ojo izquierdo OI

AVOD0 Indica la cantidad de personas examinadas en la comunidad con agudeza visual entr 20/20 y 20/60 en el ojo derecho

AVOI0 Representa la cantidad de personas examinadas en la comunidad con agudeza visu entre 20/20 y 20/60 en el ojo izquierdo

AVOD1 Indica la cantidad de personas examinadas en la comunidad con agudeza visual entr 20/70 y 20/200 en el ojo derecho

AVOI1 Representa la cantidad de personas examinadas en la comunidad con agudeza visu entre 20/70 y 20/200 en el ojo izquierdo

AVOD2 Indica la cantidad de personas examinadas en la comunidad con agudeza visu menor al rango entre 20/200 y 20/400 en el ojo derecho

AVOI2 Representa la cantidad de personas examinadas en la comunidad con agudeza visu menor al rango entre 20/200 y 20/400 en el ojo izquierdo

AVOD3	Indica la cantidad de personas examinadas en la comunidad, con agudeza visual mayor a 20/400 en el ojo derecho
AVOI3	Representa la cantidad de personas examinadas en la comunidad, con agudeza visual mayor a 20/400 en el ojo izquierdo
QPOD0	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada sin opacidades en el ojo derecho
QPOI0	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada sin opacidades en el ojo izquierdo
QPOD1	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada con un conteo exacto por debajo de 20 microfilarias en el ojo derecho
QPOI1	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada con un conteo exacto por debajo de 20 microfilarias en el ojo izquierdo
QPOD2	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada con un conteo estimado por encima de 20 microfilarias en el ojo derecho
QPOI2	Indica la cantidad de personas examinadas en la comunidad con Queratitis Punteada con un conteo aproximado por encima de 20 microfilarias en el ojo izquierdo
MFCAODN	Indica la cantidad de personas examinadas sin (ausencia de) microfilarias en la camara anterior del ojo derecho
MFCAOIN	Representa la cantidad de personas examinadas sin (ausencia de) microfilarias en la camara anterior del ojo izquierdo
MFCAODP	Indica la cantidad de personas examinadas en la comunidad con presencia de microfilarias en la camara anterior del ojo derecho
MFCAOIP	Representa la cantidad de personas examinadas en la comunidad con presencia de microfilarias en la camara anterior del ojo izquierdo
QEOD0	Indica la cantidad de personas examinadas en la comunidad sin (ausencia de) Queratitis esclerosante en el ojo derecho
QEOI0	Representa la cantidad de personas examinadas en la comunidad sin (ausencia de) Queratitis esclerosante en el ojo izquierdo
QEOD1	Indica la cantidad de personas examinadas en la comunidad con Queratitis

esclerosante con opacificidad < 1 mm de la cornea nasal y/o temporal en el oj derecho

QEOI1 Representa la cantidad de personas examinadas en la comunidad con Queratiti esclerosante con opacificidad < 1 mm de la cornea nasal y/o temporal en el ojo izquierdo

QEOD2 Indica la cantidad de personas examinadas en la comunidad con Queratitis esclerosante con opacificidad semilunar confluente inferior en el ojo derecho

QEOI2 Representa la cantidad de personas examinadas en la comunidad con Queratitis esclerosante con opacificidad semilunar confluente inferior en el ojo izquierdo

QEOD3 Indica la cantidad de personas examinadas en la comunidad con Queratitis esclerosante con opacificidad confluente que obstruye el eje visual del ojo derecho

QEOI3 Representa la cantidad de personas examinadas en la comunidad con Queratitis esclerosante con opacificidad confluente que obstruye el eje visual del ojo izquierdo

IRIDOD0 Indica la cantidad de personas examinadas sin (ausente) Iridociclitis en el ojo derecho

IRIDOI0 Representa la cantidad de personas examinadas sin (ausente) Iridociclitis en el ojo izquierdo

IRIDOD1 Indica la cantidad de personas examinadas con Iridociclitis activa en el ojo derecho

IRIDOI1 Representa la cantidad de personas examinadas con Iridociclitis activa en el ojo izquierdo

IRIDOD2 Indica la cantidad de personas examinadas en la comunidad con secuelas de Iridociclitis en el ojo derecho

IRIDOI2 Representa la cantidad de personas examinadas en la comunidad con secuelas de Iridociclitis en el ojo izquierdo

IRIDOD3 Indica la cantidad de personas examinadas en la comunidad con Iridociclitis activa y secuelas de esta en el ojo derecho

IRIDOI3 Representa la cantidad de personas examinadas en la comunidad con Iridociclitis activa y secuelas de esta en el ojo izquierdo

CATAOD0 Indica la ausencia de cataratas en el ojo derecho

CATAOI0	Indica la ausencia de cataratas en el ojo izquierdo
CATAOD1	Indica la cantidad de personas examinadas con cataratas en el ojo derecho, aunque no obstruyan la vision
CATAOI1	Indica la cantidad de personas examinadas con cataratas en el ojo izquierdo, aunque no obstruyan la vision
CATAOD2	Indica la cantidad de personas examinadas con cataratas en el ojo derecho Estas si obstruyen la vision
CATAOI2	Indica la cantidad de personas examinadas con cataratas en el ojo izquierdo Estas si obstruyen la vision
COREOD0	Representa la cantidad de personas examinadas en la comunidad sin (ausencia de) Coriorretinitis en el ojo derecho
COREOI0	Representa la cantidad de personas examinadas en la comunidad sin (ausencia de) Coriorretinitis en el ojo izquierdo
COREOD1	Representa la cantidad de personas examinadas en la comunidad con lesiones de espectro moteado ocasionado por Coriorretinitis en el ojo derecho
COREOI1	Representa la cantidad de personas examinadas en la comunidad con lesiones de espectro moteado ocasionado por Coriorretinitis en el ojo izquierdo
COREOD2	Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica nasal o temporal en el ojo derecho ocasionada por Coriorretinitis
COREOI2	Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica nasal o temporal en el ojo izquierdo ocasionada por Coriorretinitis
COREOD3	Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica en mas de una region en el ojo derecho ocasionada por Coriorretinitis
COREOI3	Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica en mas de una region en el ojo izquierdo ocasionada por Coriorretinitis
COREOD4	Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica con compromiso macular en el ojo derecho ocasionada por

Coriorretinitis

COREOI4 Representa la cantidad de personas examinadas en la comunidad con lesiones de atrofia geografica con compromiso macular en el ojo izquierdo ocasionada por Coriorretinitis

NEROPOD0 Representa la cantidad de personas examinadas en la comunidad sin lesiones en el nervio optico en el ojo derecho (ojo normal)

NEROPOI0 Representa la cantidad de personas examinadas en la comunidad sin lesiones en el nervio optico en el ojo izquierdo (ojo normal)

NEROPOD1 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de disco palido sin "evainamiento" vascular en el nervio optico del ojo derecho

NEROPOI1 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de disco palido sin "evainamiento" vascular en el nervio optico del ojo izquierdo

NEROPOD2 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de disco palido con "evainamiento" vascular en el nervio optico del ojo derecho

NEROPOI2 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de disco palido con "evainamiento" vascular en el nervio optico del ojo izquierdo

NEROPOD3 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de Papilitis en el nervio optico del ojo derecho

NEROPOI3 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de Papilitis en el nervio optico del ojo izquierdo

NEROPOD4 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de Excavacion galucomatosa en el nervio optico del ojo derecho

NEROPOI4 Esta variable representa la cantidad de personas examinadas en la comunidad con lesiones de Papilitis en el nervio optico del ojo izquierdo

VII DIAGRAMA DE RELACION ENTRE ARCHIVOS.

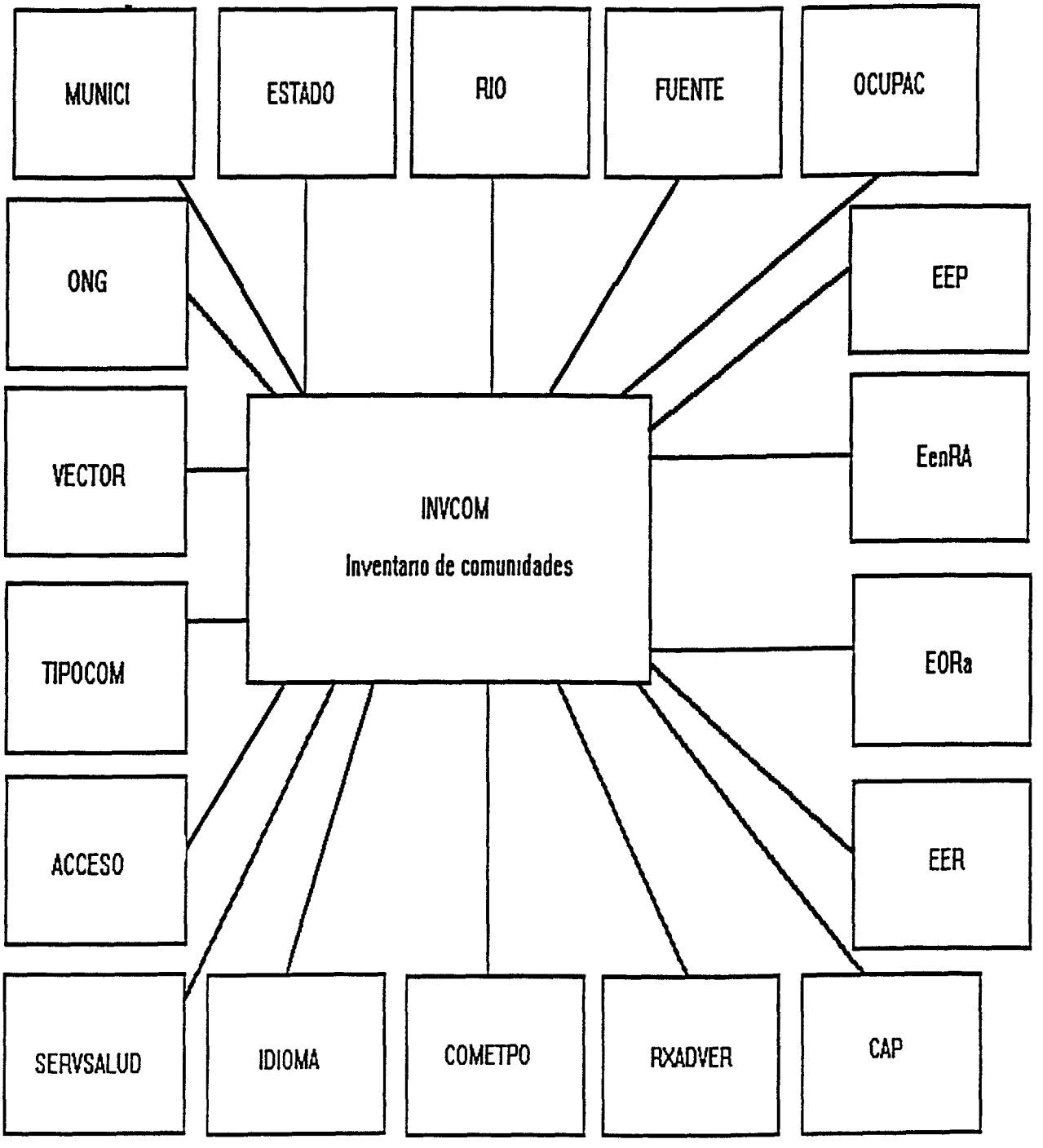

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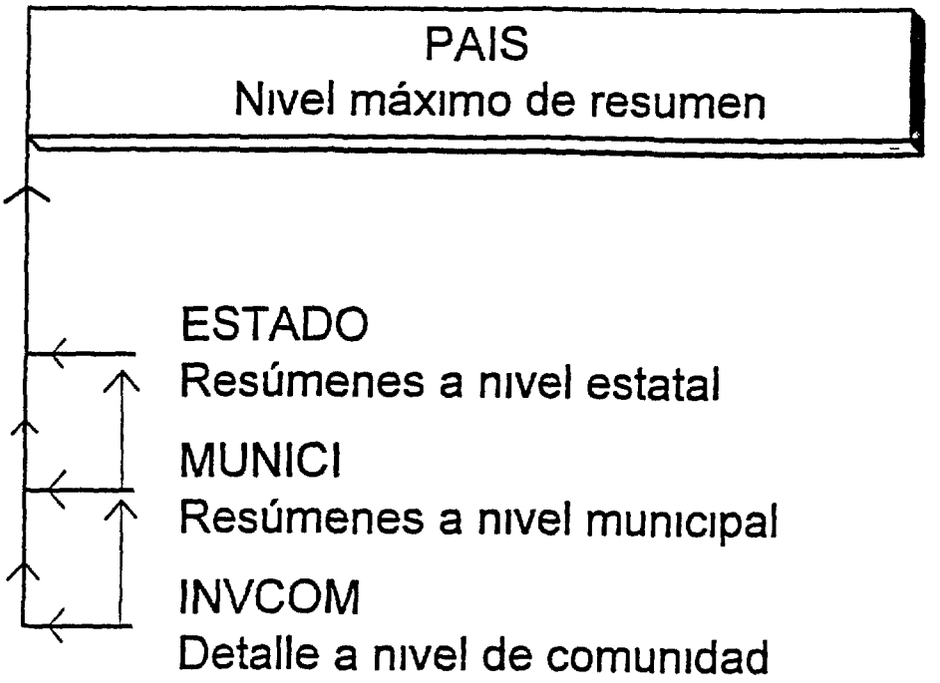
Diagrama de relación entre archivos de resumen



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APPENDIX H.

1997 Plan of Action, HealthManagement Information Systems and Health Geographic Information Systems Components

Programa para la Eliminación de la Oncocercosis en las Américas
Onchocerciasis Elimination Program for the Americas
(OEPA)

APPENDIX H

1997 Plan of Action
Health Management of Information Systems &
Health Geographic Information Systems components

Prepared by
Freddy L Clark, M Sc
Long Term Consultant on Information Systems
January 1997

14 calle 3-51 zona 10, Murano Center Oficina 801
TEL (502)366-6106 al 109 Guatemala 01010,Guatemala FAX (502)366-6127
E-mail oepa@guate net

Tables of Contents:

A. INTRODUCTION

This year s Plan of Action is presented following the same format used last year The Plan is divided into four sections Justification, Methodology, Management of Health Information Systems Activities, and Health Geographic Information Systems Activities

B. JUSTIFICATION

As OEPA's Long Term Consultant on Information Systems, and responsible for the programming and execution of activities of the Health MIS and GIS components, I present the following Plan of Action for 1997

This Plan of Action is based upon an evaluation of each country done after visits by the Consultant, suggestion s presented at the VI Inter American Conferences on Onchocerciasis, the Task Force on GIS/MIS, and the specific request of each countries' Director in their own Plan of Action for this year Special attention has been given to the activities of those countries considered of programmatic priority due to the advance and effective coverage of the ivermectin distribution program, and to countries of strategic importance for the number of positive cases they report

C. METHODOLOGY

To meet the goals of the plan the following methodology will be used

1 All computerized applications will be developed using high level structured programming languages with the help of relational data base management systems (DBMS) to handle the data, assure its consistency and ease of use

2 An analysis will be done before the development of software applications

3 Industry standard normalization of data will be used for database and file design

4 Any training sessions in the MIS/GIS area will be done using the "hands on" concept The audience will be the end users of the System The consultant will emphasize doing the training in the actual workplace of the end users

5 Country visits will be done to meet the specific goals, and after an agenda has been proposed

to the Director of the National Plan and OEPA's Director

D. Management of Health Information Systems Activities

The following activities in the Health Management of Information Systems are proposed for 1997

D1 Country visits

Expected Results

The LTC has schedule trips to Brazil (Establish Database/GIS), Colombia and Ecuador (Evaluate work done by local STCs), Guatemala (Georeference of Hyper and Meso-endemic communities) Mexico (Evaluate activities), Venezuela (Evaluate activities in REMO and GIS) A report will be produced, and presented to OEPA's staff at the end of each activity

D2 Headquarters standard Health Information System

Expected Results

A standard and easy to use and maintain Health Information System

D3 Provision of software and equipment for the Health MIS component of the National Programs

Expected Results

Give the National Programs adequate hardware and software to support their own Health Information System

D4 Conduct workshops on Health MIS in the countries

Expected Results

A Health MIS/GIS workshop will take place in Brazil in April The purpose is to consolidate the efforts they have been doing since last year and to link their database to a GIS People at the Local Ministry of Health trained in Health MIS

D5 Building, creation or enhancing module to extract standardized data to be used in the OEPA headquarters data base

Expected results

The STC's in Colombia and Ecuador will be in charge of developing that tool In Brazil, it will be developed during the workshop In Venezuela. a copy of the file will do it because the database structure is the same In Guatemala it will not be possible because the program does not work at the community level In Mexico, it is still undecided because the LTC has not had the opportunity to check the existing structure

D6 Consolidation of Information Systems in the countries

Expected Results

The LTC will visit all endemic countries In Brazil, will work in cooperation of an STC to help in the consolidation of their Health MIS For Colombia and Ecuador, local STCs and end products have been identified In Venezuela will travel evaluate the consolidation of their Health Information System based on the file structure proposed by the OEPA LTC, In the case of Mexico, the Information Systems needs to be consolidated at the State level (Chiapas and Oaxaca) In Guatemala, cooperate with local STCs in the development and implementation of an electronic data keeping system to record data about treatment of endemic communities of years before 1997, and in the training of end users of an easy to use and maintain programs to report treatment data at the municipality level

D7 Standardization of quarterly data base for analysis of individual countries and the regional strategy treatment at risk population

Expected Results

The LTC in cooperation with the LTC in epidemiology and the Expert Advisor will regularly gather and standardized quarterly treatment data from the six endemic countries and produce a consolidated document for reporting purposes

D8 Use of pen or other portable computers as data gathering instruments in the field

Expected Results

A proposal to use this field proved technology as a data gathering alternative in at least one National Program

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E. Health Geographic Activities:

E1 Create an inventory of GIS technological capabilities developed in the countries

Expected results

A list of different capabilities that each country can do about GIS (Production of digital maps, production of thematic maps, spacial analysis, georeference of communities, maintenance of a community inventory)

E2 Monitor the implementation of a GIS in all endemic countries

Expected results

Support local GIS in every country, and produce a report to the Director at the end of the year. Short Term Consultants have been identified and contracted to develop GIS capabilities in Colombia and Ecuador. The LTC will need to travel to these countries to assess that quality work has been done

E3 Inventory of equipment donated and required for GIS activities

Expected results

During visits to the six endemic countries assess all inventory donated by OEPA, and equipment that is still required to support GIS operations. This includes portable computers, antennas, GPS units, color printers, and software licenses

E4 Production of maps

Expected results

Supervise the production of digital maps by the Regional Mapping Center, and any other GIS Center. Supervise the production of thematic maps printed at the Regional Mapping Center to assure its accuracy. Assure that maps produced at other GIS Centers are accurate and comply with minimum quality standards. Increase the area coverage in quantity, and improve the quality of digital maps for those countries that requested them. Thematic maps with treatment data and epidemiological data of the programs

E5 Workshops on GIS

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Expected results

To optimize resources, after the implementation of the Health Information System, the LTC in Information Systems will conduct a workshop and help in the installation of a Health Geographic Information System for local authorities and end users in Boa Vista and Manaus, Roraima and Amazonas states in Brazil

E6 Review of new hardware and software to support GIS activities

Expected results

The LTC will constantly review periodicals and keep up to date in developments of products that can be of help in the support of the six endemic countries

E7 Implementation and monitoring community inventory

Expected results

The LTC will travel to the six endemic countries to help the authorities of the six National Programs in the implementation and monitoring of the community inventory This includes trips to the two endemic States in Mexico, Ecuador, Colombia, Venezuela, Brazil, and Guatemala.

E8 Other activities related to GIS

E8 1 Present a paper at the V Latin American Congress of Tropical Medicine (CLAMT) on GIS and it's use in Public Health Problems

Expected Result

Abstract was written and sent for consideration in 1996 The Abstract has been accepted A written invitation by the President of the Conference Committee has been received The Consultant will present the products developed in the implementation of a Regional Onchocerciasis Geographic Information System

E8 2 If accepted by the Conference Committee, Present a Paper on GIS as Public Health tool in Developing Countries at the XVII Annual Environmental Systems Research Institute User Conference

Expected Product

Abstract of the Conference was written and sent for consideration in 1996 Acceptance is

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pending The goal is to present the products developed in the implementation of a Regional Onchocerciasis Geographic Information System

E8 3 Georeference hyper-endemic and meso-endemic communities, hospital, health centers, health posts and posts of health volunteers in the endemic zone of Guatemala

Expected Product

Files with geo-reference readings (latitude, longitude, altitude) of hospitals, health posts, health centers, volunteer health promotor's sites of any kind, and endemic communities The data gathered will be incorporated in the Community Inventory of Guatemala Increase the coverage of small endemic communities in thematic maps that currently do not appear on available 1 50,00 scale paper maps because of its size

E8 4 Present the advance of the Health MIS/GIS components of the project in IACO 1997

Expected Results

Present the current advance of both Health MIS and GIS components at the conference

Onchocerciasis Elimination Program for the Americas
Programa para la Eliminación de la Oncocercosis en las Americas
(OEPA)

MEMORANDO

PARA Dr Edmundo Alvarez FECHA 27 de enero de 1997

DE Freddy L Clark

REF Calendario de posibles viajes para 1997

Dr Alvarez

Sirvase encontrar adjunto mi calendario de posibles viajes a realizar durante este año La tabla no incluye viajes al interior de Guatemala, pues estos se pueden programar mas facilmente por tratarse de viajes locales

País	Del	Al	Proposito
Venezuela	19 febrero	27 febrero	Inicio de la ejecucion del componente para 1997, estado actual de compras de equipo y logistica de actividades Visita a Instituto de Biomedicina y CAICET
Cuba	2 marzo	8 marzo	Exponer en el V CLAMT
Colombia	10 marzo	13 marzo	Inicio de la ejecucion del componente en 1997, logistica de actividades de consultoria del Ing Roberto Saenz
Mexico	18 marzo	22 marzo	Inicio de la ejecucion del componente en 1997, logistica de actividades del componente en Chiapas y Oaxaca
Brasil	6 abril	20 abril	Estructuracion de base de datos, analisis y manejo de Epi-Info, e integracion a un SIG Taller de SIG
Venezuela	13 mayo	24 mayo	Actualizacion y seguimiento a propuestas del Programa Nacional en su Plan de Accion 1997 Viaje a ver el MERO en foco norte
Mexico	2 junio	7 junio	Actualizacion y seguimiento a propuestas del Programa Nacional en su Plan de Accion 1997 Viaje a Chiapas y Oaxaca

14 calle 3-51 zona 10, Murano Center Oficina 801
TEL (502)366-6106 al 109 Guatemala 01010,Guatemala FAX (502)366-6127
Email oepa@guate net

País	Del	Al	Proposito
Brasil	17 junio	27 junio	Evaluacion de la capacidad instalada en Boa Vista y Manaos
USA	6 julio	13 julio	De ser aceptado por el comite organizador exponer en la XVII Conferencia Anual sobre GIS en San Diego, California
Colombia	21 julio	23 julio	Evaluar resultados de consultoria del Ing Roberto Saenz Evaluar el SIG de Colombia
Ecuador	23 julio	26 julio	Evaluar resultados de consultoria del Dr Marcelo Aguilar, evaluar estado de la Base de Datos del Programa y su SIG
Mexico	1 octubre	3 octubre	Evaluacion de actividades 1997, y propuesta de actividades para 1998
Brasil	21 octubre	26 octubre	Evaluacion de actividades 1997, y propuesta de actividades para 1998
Venezuela	27 octubre	29 octubre	Evaluacion de actividades 1997 y propuesta de actividades para 1998
Colombia	noviembre	noviembre	Participacion en VII IACO

Atentamente

D797

14 calle 3-51 zona 10, Murano Center Oficina 801
TEL (502)366-6106 al 109 Guatemala 01010,Guatemala FAX (502)366-6127
Email oepa@guate net

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Onchocerciasis Elimination Program for the Americas
Programa para la Eliminacion de la Oncocercosis en las Americas
(OEPA)

MEMORANDO

PARA Dr Edmundo Alvarez FECHA 11 de febrero de 1997

DE Freddy L Clark

REF Informacion requerida D1397

Dr Alvarez

De acuerdo a su solicitud del dia de hoy, le remito la informacion requerida por usted Espero la encuentre de utilidad

Atentamente

Components Health MIS and GIS

Country Brazil

✔ No trips done to this country in 1996

✔ Training of 4 members of the National Program in MIS and GIS during the MIS/GIS workshop in Guatemala

Country Colombia

✔ No trips done to this country in 1996

✔ Training of 2 members of the National Program in MIS and GIS during the MIS/GIS workshop in Guatemala

Country Ecuador

✔ Made a presentation on the new community inventory to the assistants of the Epidemiology workshop held in Esmeraldas, Ecuador

✔ Trained Head Epidemiologist of the program in the use of GPS units, and geo-reference of endemic communities

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TEL (502)366-6106 al 109 Guatemala 01010,Guatemala FAX (502)366-6127
Email oepa@guate net

workshop in Guatemala

- ✔ Met with former National Director Dr Ronald Guderian during the PEC held in Guatemala in May Here, Dr Guderian took all structures needed to adopt the Community Inventory in Ecuador

Country Guatemala

- ✔ Trianing of 2 members of the Ministry of Health in MIS and GIS during the MIS/GIS workshop in Guatemala
- ✔ Met with Director of the National Plan and his Consultant to give suggestions about the MIS component of the National Plan
- ✔ Visit to the authorities of the National Plan of Guatemala to give suggestions about the MIS component of the National Plan for the Plan of Action of 1997

Country Mexico

- ✔ Training of 6 members of the National Program of Mexico in MIS and GIS during the MIS/GIS workshop in Guatemala
- ✔ Made a presentation of Geographic Information Systems and its applications to Public Health Problems in Oaxaca, Mexico May
- ✔ Made a presentation on the Importance of Quality Work in reporting data at the Pre-congress before IACO 1996 in Oaxaca. Nov
- ✔ Made 2 presentations at the VI IACO 1996 in Oaxaca First presentation about advance of the GIS project and second on Next steps of GIS regional project

Country Activities of the OEPA Regional Office

- ✔ Made a presentation for the Program Coordination Committe in May
- ✔ Made a presentation for the Program Evaluation Committee
- ✔ Organize the Regional MIS/GIS workshop that took place in September in Guatemala City
- ✔ Took part in the Regional MIS/GIS workshop making the presentations on Importance of Quality Control of Data, the Community Inventory, Use of GPS units and Geo-reference

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14 calle 3-51 zona 10, Murano Center Oficina 801
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Email oepa@guate net

of endemic communities

✔ Went to a 3 day workshop on the "Logic Frame" methodology This was a workshop organized by the Interamerican Development Bank

Country United States of America

✔ Submitted an abstract for a presentation to the Organizing Committee of the 13th ESRI GIS Symposium Acceptance is pending

Country Venezuela

✔ Trained staff in the use of GPS units and geo-reference of endemic communities Sucre State August

✔ Training of 2 members of the Venezuelan National Program in MIS and GIS during the MIS/GIS workshop in Guatemala.

14 calle 3-51 zona 10, Murano Center Oficina 801
TEL (502)366-6106 al 109 Guatemala 01010,Guatemala FAX (502)366-6127
Email oepa@guate net

APPENDIX I

Annual and Semi-annual Reports of Epidemiological Long Term Consultant

APPENDIX I

ANNUAL REPORT

Contractor John P Ehrenberg, M D , M Sc , Sc D

Position Epidemiology Long Term Consultant (EPI/LTC)

Period covered by the report 1 June, 1995 to 31 May, 1996

Date of report : 3 June, 1996

Scope of Work . See attached copy of page 2 of the contract listing 6 tasks

Tasks & Accomplishments :

1) Visit the endemic countries to determine if each national plan has adopted uniform guidelines for the epidemiological (includes parasitological, entomological and ophthalmological evaluations) characterization of onchocerciasis.

Trip schedules & countries

	Country	Dates	Accomplishments
•	Ecuador	5 - 11 of July, 1995	* LTC's 1 overseas assignment * Significant briefing experience for the LTC on OEPA's main goal * Discussion of the epidemiological indicators workshop agenda with the Nat Plan Authorities * Discussion of binational initiatives * Determine status of the Nat Program

	Country	Dates	Accomplishments
•	Brasil	10 - 15 of September, 1995	* Technical guidance in the preparation of Brazil's 1996 Nat plan proposal * Thorough discussion of the TFGECO/92 recommendations * Discussions on ways to improve Baseline Data Collection * Determine status of the Nat Program
•	Mexico	1 - 4 of October, 1995	* Trip to Chiapas * Participated in a Fieldworker's Workshop which included a thorough discussion of the TFGECO/92 recommendations * Advantage was taken of the trip to discuss programatic (IACO/95 and EPI-Workshop /96) & finantial issues (STC contracts) * Determine status of the Nat Program
•	Colombia	16 - 18 of October, 1995	* Thorough discussion of the TFGECO/92 recommendations * Technical guidance in the preparation of Colombia's 1996 Nat Plan Proposal * Discussion on the relevance of a comprehensive Data Info /System in GIS * Evaluation of Preliminary Entomological Proposal submitted by Dr P Muñoz * Discussion of binational initiatives * Determine status of Nat Program
•	Venezuela	18 - 21 of October, 1995	* Thorough discussion of the TFGECO/92 recomemendations * Technical guidance in the preparation of Venezuela's 1996 Nat Plan Proposal * Discussion on the relevance of a comprehensive Data Info /System in GIS * Discussion on ways to improve coordination of the program (INB-CAICET) * Discussion of binational initiaves * Determine status of Nat Program

	Country	Dates	Accomplishments
•	Brasil	4 - 12 of November, 1995	* Attendance at I A C O /95 * Advantage was taken of this meeting to discuss programatic issues related to the 6 Nat Programs & to determine their status
•	Ecuador	14 - 23 of January, 1996	* EPI/Workshop main achievement was to reenforce the need for the Nat Programs to adhere to a commonly agreed upon epidemiological indicators guideline in onchocerciasis as a prerequisite for a uniform epidemiological surveillance system
•	Mexico	6 - 8 March, 1996	* Trip to Oaxaca * Participated in a Fieldworker's Workshop which included a thorough discussion of the TFGECO/92 recommendations & the Ecuador Workshop list of EPI/Indicators * Situation Analysis of the Program's Information System status & needs
•	Brasil	19 - 27 May, 1996	* Trip to Boa Vista, Roraima * Participated in a National Program Evaluation Workshop which included a discussion of the TFGECO/92 recommendations & the Ecuador Workshop list of EPI/Indicators * Thorough discussions on entomological related topics relevant to the program * Situation analysis of the program's IVM distribution & sustainability potentials * Preliminary discussion of the 1997 Nat Plan Proposal

Tot number of days spent in overseas assignments 55

2) Attend conferences, workshops & other events that the Director determines to be necessary for support of the development of the research network of the region

The " Research Network " was until recently, an unresolved issue This subject was addressed during the last PCC Meeting (15 & 16th/May/1996) The EPI/LTC **attended some** of the sessions

Although I am not aware of any specific resolutions which were taken by the PCC/OEPA to establish the precise functions & jurisdiction of the network, efforts were made to discuss 3 projects which could call for the activation of just such a component

The three proposals which were technically revised by myself were

- Development of a PCR diagnostic assay for differentiating cryptic species in the S exiguum complex and its applications to field research and onchocerciasis control by **P. Muñoz, R. Guderian & C. Porter.**

- Detection of O volvulus by PCR technique in the vector S exiguum from endemic areas of onchocerciasis in Ecuador by **R. Guderian.**

- Componente de evaluaciones entomologicas rapidas de transmision by **O. Ochoa.**

Discussions on supporting a PCR Regional Laboratory Facility in Ecuador took place during the same PCC meeting Dr **Ron Guderian** would assume responsability for this facility The PCC noted, Dr Guderian would have to come up with a proposal which could subsequently support the LTC in advertising the services of the Ecuador based PCR laboratory on a regional scale The Universidad del Valle de Guatemala was considered by the PCC as a potential second PCR laboratory facility

Accomplishments / Task Outcome

The EPI/LTC conducted various meetings to discuss the project submitted by Dr Onofre Ochoa This project was approved and has since been completed pending only the final report by the STC One set of a fly collection is awaiting PCR analysis (stored in OEPA)

I understand Dr Guderian's project (see above) was also approved by the PCC as part of the effort to establish the PCR Regional Laboratory Facility I expect I shall be interacting with Dr Guderian in the future to consolidate the proposed network

I was informed, the project submitted by Dr Paulina Muñoz was considered to be too basic and therefore out of the scope of OEPA's financial capabilities OEPA's EPI/LTC did comment on the proposal (in writting to C Porter) and suggested alternative funding sources

3) Work with national & regional health organizations, specially PAHO, to insure the adoption of standardized methods in each country and the development of guidelines for baseline and follow up assessments to evaluate the impact of mass treatment with IVM.

This Task , **still in progress,** relied on some of the following activities

- Trips to all 6 countries (see under Task 1)
- Revision of the submitted National Plan Proposals at OEPA headquarters offices in Guatemala accompanied by an active communication exchange between OEPA's EPI/LTC and the Nat Program authorities **This activity has taken place throughout the length of the contract period**
- 1996 Onchocerciasis Epidemiology Workshop in Esmeraldas, Ecuador with the participation of P A H O
- The Esmeraldas workshop resulted in the production of a list of commonly agreed upon epidemiological indicators as a follow-up to the TFGECO/92 recommendations These indicators shall be integrated into a set of guidelines to be used in the characterization of onchocerciasis and to assess the impact of IVM treatment in the Americas
- The list of indicators started to circulate among all of the workshop participants as of the 12th/April/96 thus already achieving what the actual guidelines are meant to do (fullfill the above task)

4) Work together with the OEPA H/MIS consultant to develop standardized data base structures.

This task, **still in progress,** relied on some of the following activities

- The trip to Oaxaca, Mexico, provided both LTC's with the opportunity to engage in a joint, on site analysis of the program's information system's status / capabilities
- The Esmeraldas Workshop, gave both LTC's the opportunity to obtain updated information on all 6 Nat Program's Information System capabilities & needs as well as a first hand experience with the list of epidemiological indicators to be integrated within all 6 program's future data base structures including GIS
- Based on the experience of Mexico in establishing and testing a simple data collection format, OEPA's EPI/LTC has promoted the use of simple formats in other countries as well (e g Guatemala & Brazil), taking into consideration the list of epidemiological indicators agreed upon in Ecuador

- The Ecuador Workshop's overall concensus was that EPI-INFO could be readily used as a reliable tool to collect information at the peripheral level (e g by the program's field epidemiologist) Other more sophisticated programs could be used at the program's headquarters (central level) to concentrate the information and/or to prepare Maps as an epidemiological surveillance tool

5) Conduct workshops for national specialists to strengthen program staff in all facets of the epidemiologic component.

The EPI/LTC has participated and/or helped coordinate 4 workshops (2 in Mexico, 1 in Ecuador and 1 in Brazil) throughout the current annual report period (see under number 1 for details of activities) Although this activity should be part of a continuous process, I consider this task has so far been met

6) In cooperation with national plan staff and short term consultants of your selection, mantain a schedule and budget of all tasks planned for OEPA funding in each country and be able to report on the progress of all tasks ongoing for the activities stated in task 1 Participate in evaluation activities and prepare semiannual and annual reports of progress in each country

This task is currently coordinated by OEPA's Deputy Director, Dr Guillermo Zea-Flores So far, all three of OEPA's LTCs analysed the national plans submitting their comments to the Deputy Director who then integrated a corresponding task & budget sheet on all three components, the epidemiological, health education & information systems approving, disapproving or conditioning any given element upon a proper justification by the program's authorities Final approval of those items labeled as "to be justified" is the responsability of the PCC

The EPI/LTC has prepared and submitted reports of progress for each country These reports (copies of overheads available) were presented at the PCC meetings, the last of which took place on the 15 &16th of May, 1996 in Guatemala City

SEMIANNUAL REPORT

Contractor . John P Ehrenberg, M D ,M Sc ,Sc D

Position - Epidemiology Long Term Consultant (EPI/LTC)

Period covered by the report 1 June, 1996 to 31 December, 1996

Date of report 2 December, 1996

Scope of Work *See attached copy of page 2 of the contract* **listing 6 Tasks**

Tasks & Accomplishments

1) Visit the endemic countries to determine if each national plan has adopted uniform guidelines for the epidemiological characterization of onchocerciasis

Trip schedules & countries

	Country	Dates	Accomplishments
•	U S A	24-26/June/1996	* LTC met with Dr Manuel Bavona in Miami to work on the last draft of the Epidemiological Guideline in Onchocerciasis Dr Bayona is an international authority on the subject * A simple example of the CMFL formula was included in the guideline
•	Guatemala	3/July/1996	* One day field-trip to Chiquimulilla to support the implementation of the National Program's new Treatment Record Formats * Copies of the Epidemiological Guideline were distributed among the participants

	Country	Dates	Accomplishments
•	Venezuela	28-31/July/1996	* Venezuela's National Program had registered only minor progress to this date Meetings took place at the I B in Caracas * A thorough Situation Analysis of Venezuela's Program was conducted as a result of this mission to Caracas The analysis included programatic, finantial & bi-national issues * Meetings took place involving National Program authorities, P A H O & U N D P Officials * A U N D P based administration & money transfer mechanism was established. * O E P A 's plan proposal, community inventory and treatment report formats were delivered & discussed with the authorities * The situation analysis helped establish the 1997 National Plan priorities & needs and improve the coordination between north and south (I B & CAICET)
•	Colombia	1-2/August/1996	* Meetings took place in Bogota (I N S) * Situation Analysis to determine progress of the 1996 National Plan and establish 1997 priorities * Programatic issues included discussions on pending entomological & ophthalmological evaluations as well an up date on pending orders (e g materials & reagents for RENTA) * Finantial issues included a discussion on counterpart expenditure reporting Pending finantial reports were taken back to OEPA * O E P A 's plan proposal, community inventory and treatment report formats were delivered and discussed with the authorities
•	Brazil	5-9/August/1996	* Meetings took place in Brazilia at the Ministry of Health

	Country	Dates	Accomplishments
	Brazil	continues	* Separate meetings were held with P A H O & U N D P Officials * Situation analysis to determine progress of the 1996 National Plan and establish 1997 priorities * Programatic issues included discussion of O E P A new plan proposal, community inventory and treatment report formats
•	Mexico	1-3/September/1996	* Participated in an entomology course in Tapachula, State of Chiapas * Speaker in two conferences * Discussion with Program authorities on pending STC contracts, STC and treatment reports and other matters
•	Venezuela	2-6/October/1996	* Participated in the II Onchocerciasis Binational Meeting Venezuela - Brazil held in CAICET, Puerto Ayacucho * Speaker in one conference * Raporteur in several sessions and colaborator in the preparation of the meeting's final document * Participated in several individual discussions with representatives of both programs (Brazil & Venezuela) to address 1996 pending matters and to obtain an up-date on the 1997 proposals
•	Ecuador	6-8/October/1996	* Meetings took place in Quito (Vozandes) * Thorough Discussion on the feasability of the PCR Unit at the Hospital Vozandes A full report of this discussion was sent to the PCC members in anticipation of IACO's PCC analysis of PCR in onchocerciasis * 1996 National Plan up-date & pending matters * Revision and discussion of the first 1997 National Plan Draft This places Ecuador in the lead with an acceptable proposal to be presented to the PCC at I A C O
•	Guatemala	14-16/October/1996	* Participated in the I Onchocerciasis Binational Meeting Guatemala - Mexico held in Quetzaltenango

	Country	Dates	Accomplishments
	Guatemala	continues	* Raporteur in several sessions and colaborator in the preparation of the meeting's final document
•	Mexico	17-22/Novem /1996	* Participate in I A C O /96, City of Oaxaca. * Participate in a Pre-Congress Course with the attendance of 19 participants * Speaker in three conferences in both events * Raporteur in several sessions * Participated in the PCC meetings to revise the 1997 National Plan proposals and the PCR issue

Total number of days spent in overseas assignments (does not include field trips within Guatemala) 31

2) Attend conferences, workshops & other events that the Director determines to be necessary for support of the development of the research network of the region.

- On the research network in summary and as stated in my previous annual report (O E P A s files), the "research network" was until recently an ill-defined issue The PCR Regional Laboratory Facility was considered by the PCC/OEPA as an element contained within the concept of this network

- **Accomplishments / Task Outcome** This as yet unresolved issue prompted a recent analysis by the PCC/OEPA team during IACO/96 The PCC relied for the purpose of the discussion on a **report prepared by myself (** PCR Regional Laboratory Facility / **O.E P A 's files)** This report was based on prior consultations & meetings with Dr Richard Collins & Dr Ron Guderian (see under item 1 Trip schedules)

  Conclusion was that OEPA could **not** support the establishment of the PCR Regional Laboratory Facilities However it would consider support for the processing of Simulium flies on case by case basis It excluded support for the PCR processing of skin biopsies

  Based on the same report prepared by myself and the Dr Guderian's direct account during the meeting, the PCC's reached a concensus that OEPA should continue to support Ecuador's PCR component given Ecuador's record with PCR in Onchocerciasis and the availability in that country of a well established PCR laboratory facility as well as qualified human resources

3) Work with national & regional health organizations, specially P A H O to ensure the adoption of standard methods in each country and the development of guidelines for baseline and follow up assessments to evaluate the impact of mass treatment with ivermectin.

Ever since my incorporation in June 1995 as staff member of O E P A , I have devoted a good portion of my time & efforts to stimulate the implementation of standard epidemiological indicators among the national onchocerciasis program authorities of the 6 endemic countries in America These indicators were first proposed by a P A H O appointed Task Force in 1992 (TFGECO/92)

This Task requires a continuous feedback & follow up by O E P A 's EPI- Long Term Consultant Following events provided opportunities for this task

- Multiple missions to each one of the 6 endemic countries (see under Task 1) provided the opportunity of a one to one working contact with the national plan authorities reinforcing the above task
- Conferences were held on several occasions on this task's subject throughout this midterm period (e g *Mexico/09 96, Venezuela 10 96 Guatemala 10 96*)
- An agreement among all of the "Esmeraldas Epidemiological Workshop" participants was reached regarding the need to implement the epidemiological indicators in all of the 6 onchocerciasis affected countries as a measure to assess the impact of treatment This activity was coordinated by OEPA's EPI - LTC
- The draft list of epidemiological indicators was circulated by the EPI - LTC throughout the first half of 1996 among all the participants following the workshop before establishing a final *epidemiological guideline draft* OEPA's Director has now approved the printing of a limmited set of this guideline
- Speaker at the *1996 I A C O* (11/96) The topic of the talks were all designed to reinforce the above task
    a) Epidemiological Indicators and Data Base in Onchocerciasis
    b) Improvement of Data Base as a tool in epidemiological surveillance and treatment coverage reporting
    c) The use of adequate indicators in program assessments and disease elimination certification
- The final guideline draft was presented in O E P A 's panel exhibit & distributed among I A C O 's participants

Accomplishments / Task Outcome

The country presentations during the last I A C O illustrated the extend to which this task has been fullfilled by each of the National Plans

A brief *task situation analysis* is provided

In 1996, **Brazil's** onchocerciasis program attained, in my opinion, most progress relative to other latin american programs in setting up a basic data base system which includes full community inventory information and takes into account most of the indicators required in the epidemiological surveillance in onchocerciasis *Installing this capability within the Ministry of Health is a requirement for any future onchocerciasis elimination certification initiatives*

Ecuador's program has traditionally been refered to as the model program in the Americas It's contributions to the subject of epidemiological indicators including disease elimination indicators are significant

Mexico's onchocerciasis program has attained significant progress in adopting an electronic data base system and although the program has yet to adhere fully to the Esmeralda's Workshop recommendations, progress has also been made regarding the adoption of some of the indicators

Colombia has been extremely receptive to the EPI - LTC's feedback on epidemiological surveillance standards The national program has adhered to the Esmeralda' Workshop recommendations

Political problems have impaired progress in **Venezuela** and **Guatemala** Nevertheless, I am confident, both programs will begin to adopt OEPA's recommendations in the course of 1997 OEPA's Director has targeted both programs as the main recipients of OEPA's technical support

4) Work together with the OEPA H/MIS consultant to develop standardized data base structures

- As is the case of the previous task, this is an ongoing task which requires continuous reinforcement
- I have participated in several joint missions with the H/MIS - LTC in fullfillment of this task (e g *Mexico 09'96, Guatemala 10 96, IACO'11'96*)
- Ongoing efforts continue at OEPA's headquarters office in Guatemala to further team work on this and other subjects

5) Conduct workshops for national specialists to strengthen program staff in all facets of the epidemiologic component

- The EPI/LTC has participated and/or helped coordinate *4 events* (information contained in the LTC's trip reports, OEPA's Files, see under Task 1)

Guatemala 07'96, Mexico/09 96, Venezuela/10/96 & Guatemala/10 96

6) In cooperation with national plan staff & short term consultants of your selection mantain a schedule and budget of all tasks planned for OEPA funding in each country and be able to report on the progress of all tasks ongoing for the activities stated in Task 1. Participate in evaluation activities and prepare semiannual and annual reports of progress in each country.

- This task was coordinated by Dr Guillermo Zea-Flores I believe, Dr Zea will be relieved of this responsability as of the 1/01/97
- Progress of all 6 national plans is continuously monitored by OEPA's staff Site visits (see under Task 1) served this purpose among others
- *Situation analysis* for each of the programs (epidemiological component) were prepared, presented and delivered during the PCC meeting in May/96 and during the PEC meeting in August /96
- An annual report (June/95 to May/96) containing pertinent information was delivered as per contract with OEPA (with a copy to BID as requested by Lic Jorge Rojas)

APPENDIX J

Training Activities - OEPA

TRAINING, PLANNING SESSIONS AND RELEVAN . IEETINGS
OEPA 1996

Table 6

TRAINING	Participants	Objective	Location	Duration	Trainer
The logical frame methodology for projects design	OEPA I TCs And Expert Advisor	I earned methodology for implementations of projects	Guatemala City	3 days	IDB Staff
C IS in Onchocerciasis control	18 Delegates of the six countries	To reinforce the knowledges on the use of GIS in Onco Programs	Guatemala City	8 d ys	OEPA and staff fr Regional Mapping C Universidad del V Cuatemala
General Aspects of Onchocerciasis and its C ontrol	40 Delegates (Medical Officials and field workers) from two Local Health Services	To teach them about the disease and the methodology for its control	Guatemala Departments of Santa Rosa and Chimaltenango	One day each	OEPA Staff and Epidemiologist of
Entomology applied to Oncochcerciasis Control '	23 Delegates of Health Services of the States of Chiapas and Oaxaca, Mexico	To teach team on Entomological Techniques to be used in Oncho Program	City of Tapachula, Chiapas, Mexico	14 days	Mexico MOH and C Expert Advisor, Ep I TCs
Epidemiology Workshop in Onchocerciasis '	8 delegates from each of the six countries, 1 PAHO delegate	Standarization of Epidemiological indicators in Onchocherciasis	Esmeraldas, Ecuador	8 days	OEPA Staff(
Geo reference of endemic communities	3 persons from Venezuela MOH	Trained local staff in the use of GPS and Geo reference of endemic communities	Sucre, Venezuela	8 days	OEPA HIS/MIS
Onchocerciasis Up date Workshop	60 Oncho field workers	I each new trends on data keeping Up date oncho knowledge	Oaxaca, Oaxaca	4 days	OEPA I TCs Ep HIS/MIS, Mexi professional st
Onchocerciasis up date	18 members of Professional Staff of MOH	Training on treatment, epi standardization variables and quality control on the data process	Oaxaca, Oaxaca	1 day	OEPA's Staff(
Epidemiological evaluations"	Field workers and medical officials of Guatemalan MOH	Training in the use of epidemiological parameters in the Oncho Program	Quetzaltenango, Guatemala	1 day	OEPA I TC in Epid
Epidemiological evaluations	Brazilian MOH officials	Standardization of Epidemiological indicators	Boa Vista, Brazil	2 days	OEPA s Staff(
National Plan & Reports Formats'	Venezuelan MOH officials	Standardization of National Plan & Report Formats	Caracas, Venezuela	2 days	OEPA s Staff(
National Plan & Reports Formats'	National Program Officials (Instituto de Biomedicina)	Standardization of National Plan & Report Formats	Bogota, Colombia	2 days	OEPA I TC in Epid

(*) OEPA s Staff includes OEPA Director, Expert Advisor and the LTCs

Table 7

SESSIONS			
Revision of the National Programs	OEPA's Staff(*)	To establish the Plan of Action of the 6 Programs	OEPA HQ
Meetings with the Directors and High level Staff of the 6 Programs	Director of OEPA	Implementation of hte guidelines for planning and reporting of National Activities	Country visits
3 Technical and managerial meetings	Director and Expert Advisor of OEPA	To assist the local Staff in the process to contract of STC, purchase of equipment etc.	Mexico City
20 Technical and managerial meetings with the Director and High level Staff of Guatemalan Program	OEPA's Staff(*)	To assist local Authorities in the establishment and development of the National Program	Guatemala, City
Administrative meetings	OEPA(**)- BID/GUATEMALA	To review financial Program and Reports	Guatemala, City

(*) OEPA s Staff includes OEPA Director, Expert Advisor and the LTCs
(**) OEPA include OEPA s Director and Administrator Assistant

Table 8

150

RELEVANT MEETINGS	Participants	Objective	Location	Duration
2 meetings OEPA-Program Coordination Committee (PCC)	PCC members and OEPA s staff(*)	To review the progress of the OEPA activities	One in Guatemala City One in Oaxaca, Mexico	3 days each meetings
One evaluation meeting with Program Evaluation Committee (PEC)	PEC members and OEPA s Staff(*)	To review the progress of the OEPA activities	Guatemala City	2 days
Interamerican Conference on Onchocerciasis (IACO) +	OEPA s Staff(*), PCC, IDB Members and representatives of the 6 Country Programs	Review technical progress of the National Programs	Oaxaca, Mexico	5 days
Meetings with top level MOH authorities	OEPA's Director with a) Minister and Vice-Minister of Health in Guatemala and Ecuador b)Vice-Minister of Health in Mexico c)President of the National Federation of Health and the National Director of Health Services in Brazil d)The Director of Institute of BioMedicine in Venezuela e) The Director of Health Services and the Director of the National Institute of Health in Colombia	Strategic planning and political support	Country visits	

(*) OEPA s Staff includes OEPA Director, Expert Advisor and the LTCs

Table 9

PLANNING SESSIONS	Participants	Objective	Location	Duration
Mexico-Guatemala	Authorities of the MOH of Mexico and Gutemala with OEPA staff(*)	To define the strategics of the Programs at the borders	Quetzaltenango, Guatemala	3 davs
Brazil-Venezuela	Authorities of the MOH of Brazil and Venezuela with OEPA's Director and Epi LTC	To define the strategics of the Programs at the borders	Puerto Ayacucho, Venezuela	5 days

(*) OEPA s Staff includes OEPA Director, Expert Advisor and the LTCs

Table 10

COALITION BUILDING ACTIVITIES	Participants	Objective	Location
PAHO-OEPA Brazil, Mexico, Guatemala , Colombia	OEPA's Staff(*)	Interinstitutional strengthening and joint venture coordinations	Country visists
OEPA-UNPD/BRAZIL	OEPA Director and Epi LTC	" "	" "
OEPA-UNPD/VENEZUELA	OEPA Director and Epi LTC	" "	" "
OEPA-MECTIZAN DONATION PROGRAM	OEPA's Director	" "	" '
OEPA-INSTITUTO NACIONAL DE SALUD (COLOMBIA)	OEPA Director and Epi LTC	" "	" "
OEPA-VOZANDES (ECUADOR)	OEPA Director and Epi LTC	" "	" "
OEPA-UNIVERSIDAD DEL VALLE (GUATEMALA)	OEPA's Staff(*)	" '	
OEPA-ASOCIACION NACIONAL DEL CAFE (GUATEMALA)	OEPA's Staff(*)	" '	' "

(*) OEPA s Staff includes OEPA Director, Expert Advisor and the LTCs

APPENDIX K.

Health Education Training Materials

APPENDIX K.

Programa Para La Eliminacion De La
Oncocercosis En Las Americas (OEPA)

ONCOCERCOSIS o sea

LA ENFERMEDAD DE LA FILIARIA

EN GUATEMALA

Guatemala, Centroamerica 1996

Febrero 1996

Este documento fué desarrollado por

Coordinador de Proyecto	Michael Richards
Consultora	Ixch'umil, Eulalia Patal Xinico
Levantado de Texto	Rosalino Tichoc Cumes
Dibujantes	Mauricio Xulu y Flavio Mucia
Portada	Cholsamaj

Bajo la conducción de

Coedicion

Kaqchikel Cholchi'
Comunidad Linguistica Kaqchikel

155

2ª - 3ª personas

cuadernito o Panfleto ?

Este panfleto va dirigido a trabajadores en salud y personas que residen en zonas con presencia de Oncocercosis Para mayor comunicacion hemos editado una version bilingue Kaqchikel - Español

Se espera que a traves de una presentacion ordenada o secuenciada del ciclo de transmision de la enfermedad, se logre entender mejor la necesidad de ~~incrementar la participación comunitaria en el programa de distribucion de MECTIZAN~~ que la Población en las zonas endemicas reciba su tratamiento con mectizan de

Objetivo

?

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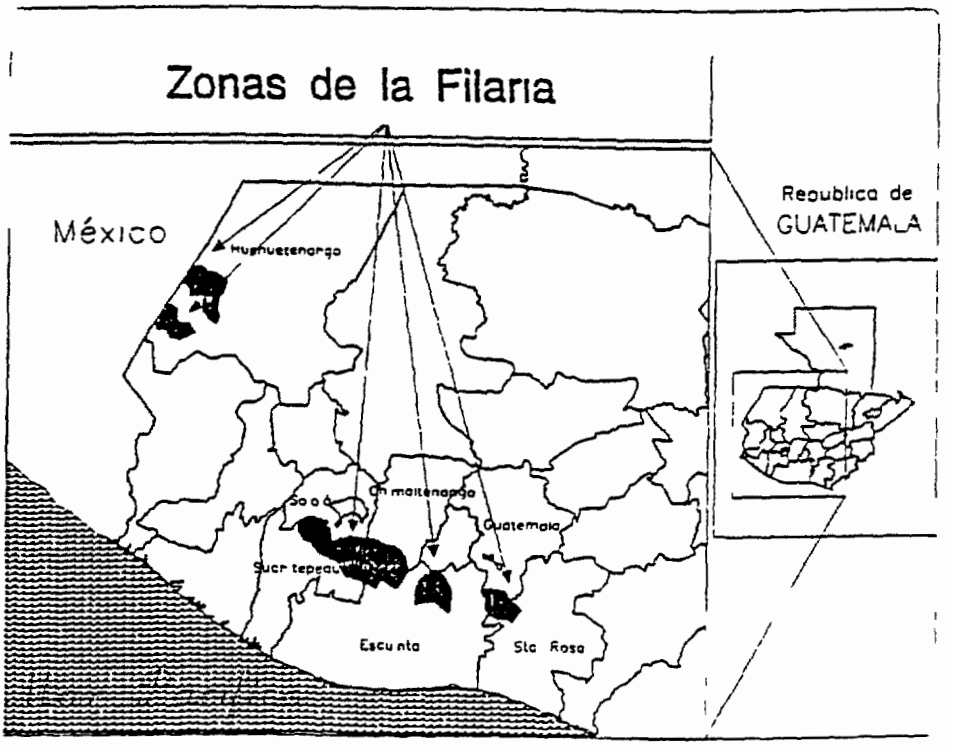
¿QUÉ ES LA FILARIA?

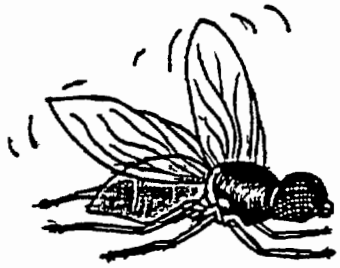
En ciertas partes de nuestro país existe una enfermedad llamada "Filaria" Esta enfermedad causa **ceguera** y **problemas de la piel** En el mapa se puede ver las partes del pais en donde la poblacion es afectada



COMO se dá la enfermedad ?

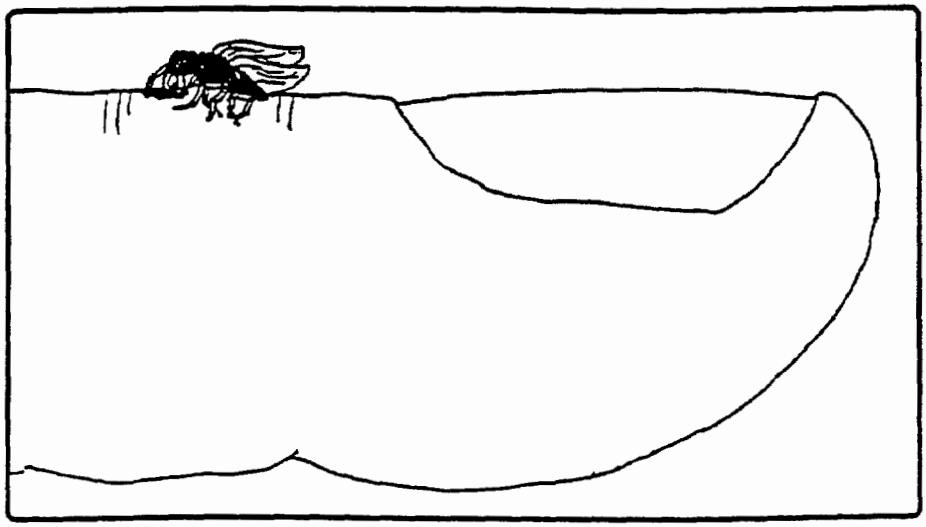
La enfermedad empieza de la siguiente manera

Hay un mosquito que se conoce como el "jen-jen".

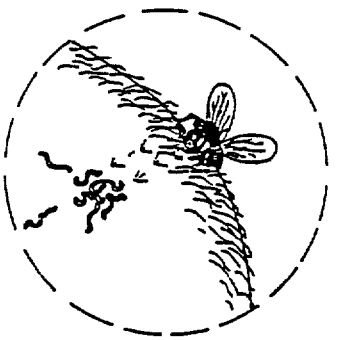


JE-JEN

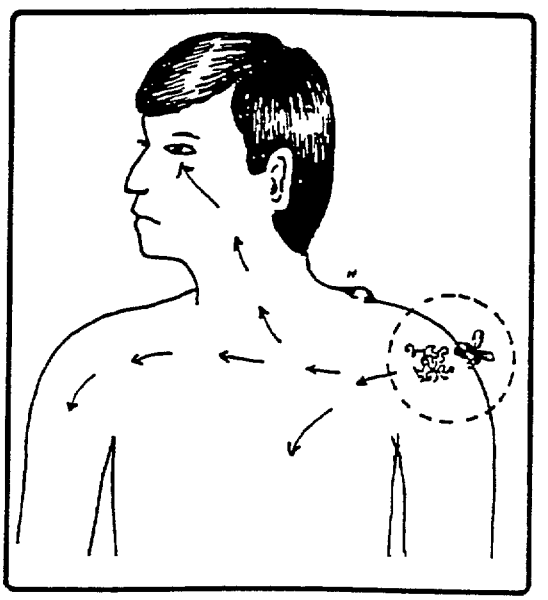
Ese mosquito molesta mucho porque pica a la gente



Pero mas que solo picar, el mosquito inyecta gusanitos en el cuerpo de la persona —



Esos gusanitos ya estando dentro de la persona empiezan a regarse por todas partes del cuerpo, principalmente en la piel y en los ojos



Estos gusanitos provocan daños serios

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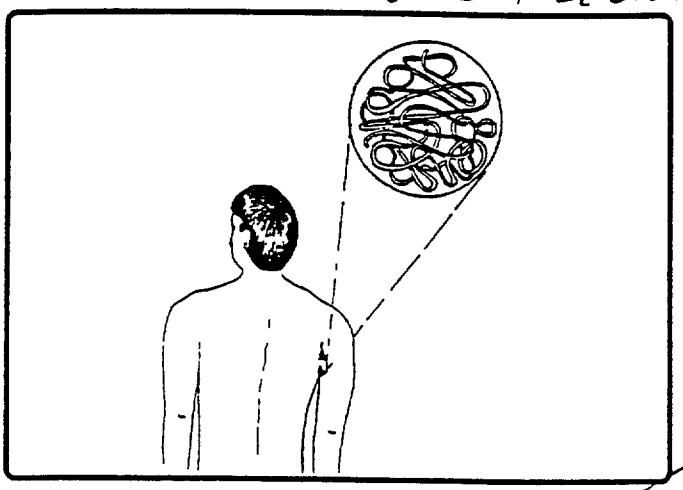
VEAMOS, CUÁLES SON ESOS DAÑOS DENTRO DEL CUERPO?

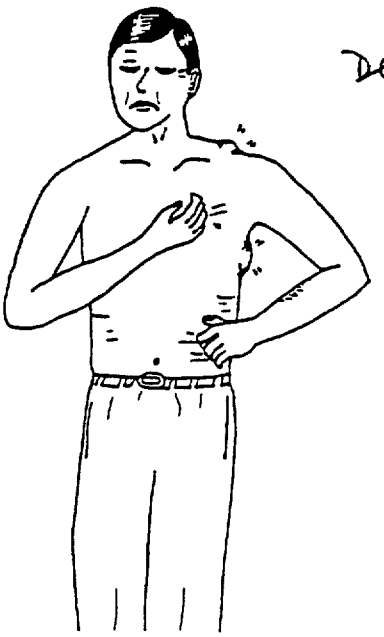
1 - 2 años después del piquete del mosquito ~~sin tratamiento~~

Los gusanitos han crecido en el cuerpo de la persona y hacen sus nidos Los nidos, o los llamados "nodulos" estan entre la la piel, los músculos y huesos Principalmente están en la cabeza, los hombros, o la espalda Estos a veces se llaman "chibolitas" y se pueden tentar



Cuando la gente no se trata con medicamento, los gusanos dan a luz a miles de sus hijos diariamente Esos gusanitos ~~hijos siempre van~~ regandose por el cuerpo Aunque los gusanitos hijos mueren a poco tiempo, los gusanos adultos que viven en los nidos pueden vivir casi 15 años!

3-10 años después del piquete de la mosca sin tratamiento

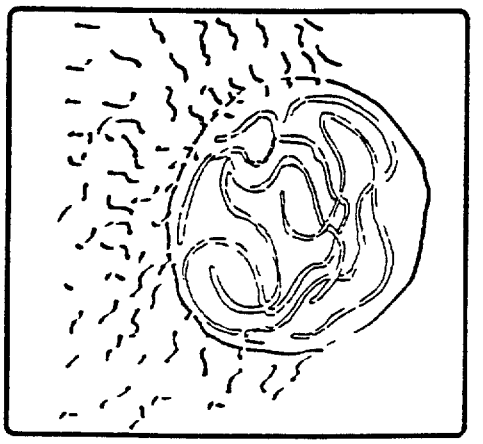


De 3 a 10 años después

Es ~~muy~~ probable que la persona tenga problemas de la piel ~~un salpullido~~, picazón o cambios en el color de la piel

piel seca, en negra

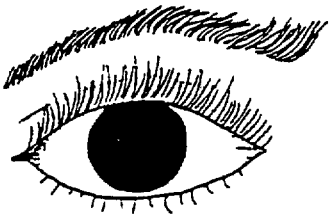
Siempre los gusanos hijos se mueren, pero los adultos siguen reproduciendose en los nidos

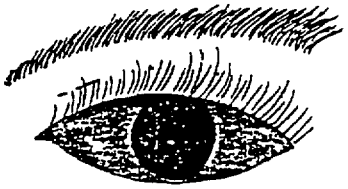


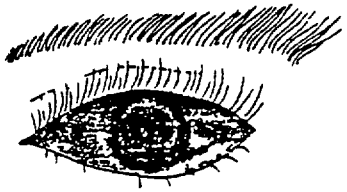
~~9- 12 años después del piquete de la mosca sin tratamiento~~

Después de 10 años con la enfermedad si no hay Tratamiento

Empiezan los problemas de la vista porque los gusanitos hijos ya han provocado daño por tanto estar nadando y muriendo dentro de los ojos

ojo sano 

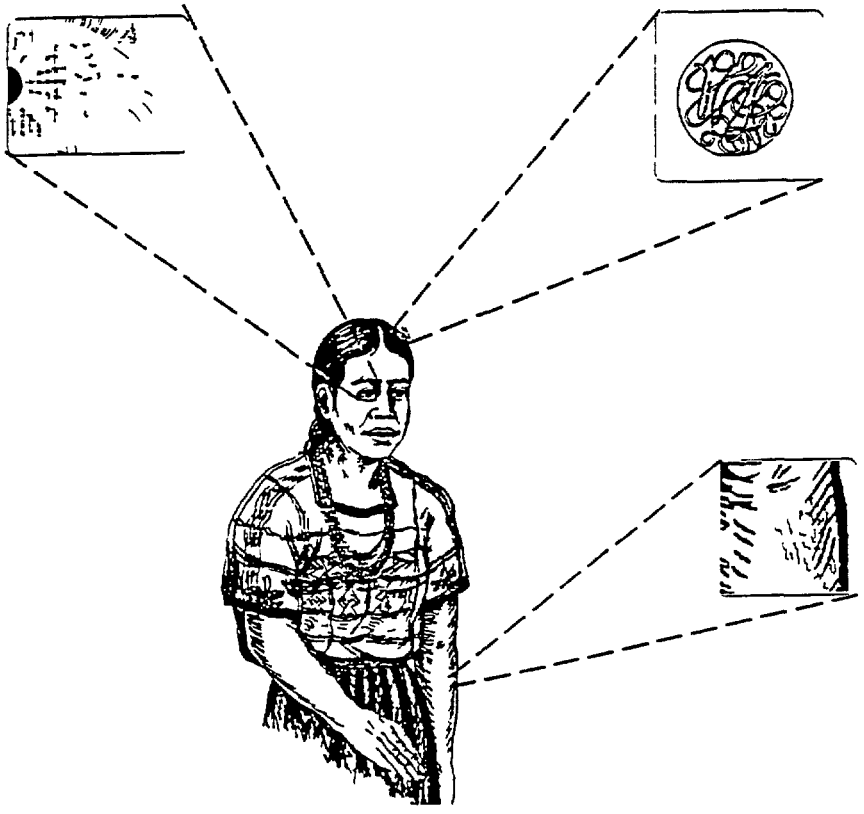
ojo deteriorado 

ojo ciego 

Generalmente hay un deterioro gradual de la vista, pero si se sigue sin tratar la enfermedad de la filiaria se puede volver completamente ciega la persona

¿Cómo daña la filiaria al cuerpo?

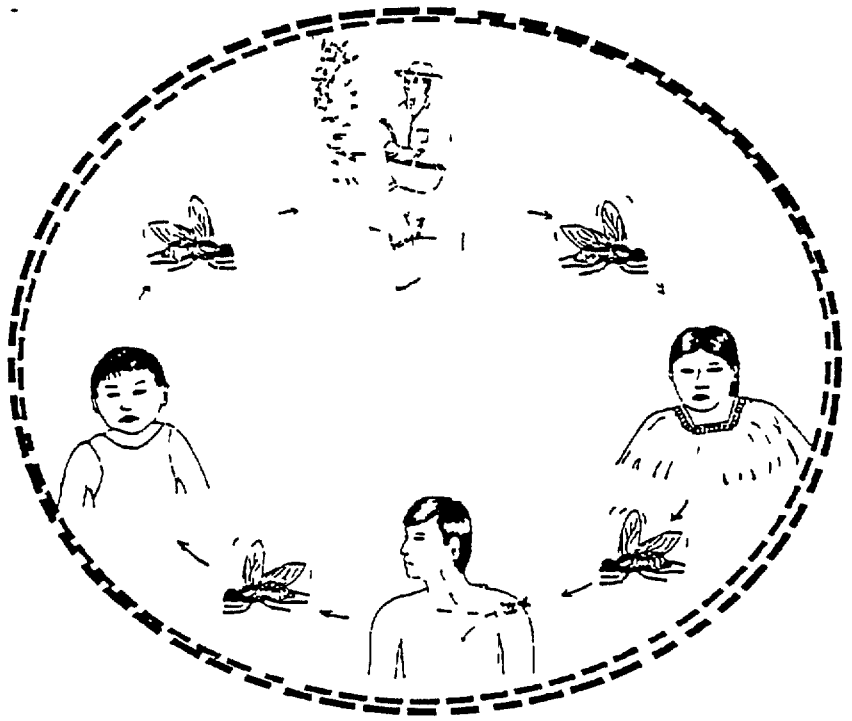
Los gusanitos hijos nadan por el cuerpo, más que todo en los ojos y debajo de la piel



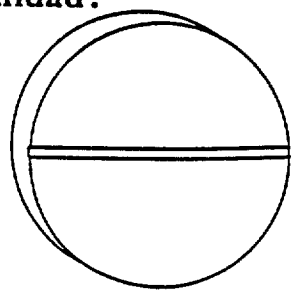
Cuando mueren los gusanitos en el ojo o en la piel, se pudren y causan los daños que empeoran la vista y que envejecen la piel

El Ciclo de Transmisión.

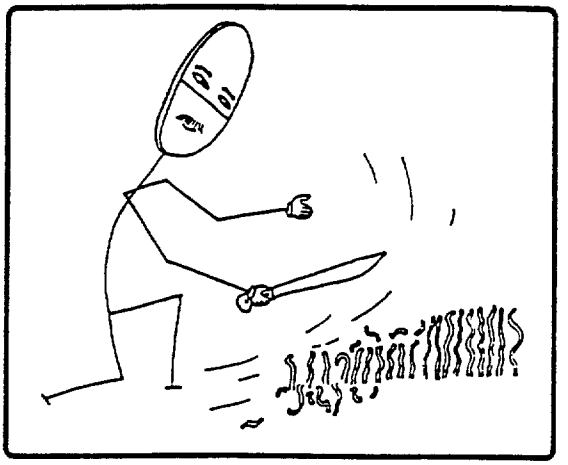
Hay una relacion entre personas y mosquitos que hace que siga viviendo la enfermedad "Filiaria" Se puede ver esto como un ciclo, en donde una persona es picada por un mosquito infectado con gusanitos Esa persona recien picada, en torno, se vuelve infectada Despues de un tiempo los mosquitos jen-jen le pican a él, y esos mosquitos llegan a infectarse, y así se completa el **Ciclo de Transmision.**



¿Como Curarse de la Enfermedad y Acabar con ella en su Comunidad?

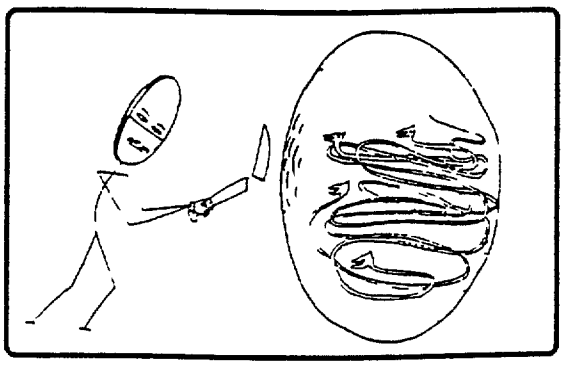


Existe un pastilla que se llama MECTIZAN que mata a los gusanitos hijos de la filiaria, los que nadan debajo de la piel y en los ojos



El medicamento mata a los gusanitos hijos, pero no mata a los gusanos adultos que estan enrollados en los nidos

Los gusanos adultos pueden aguantar dentro de sus nidos 15 años de vida

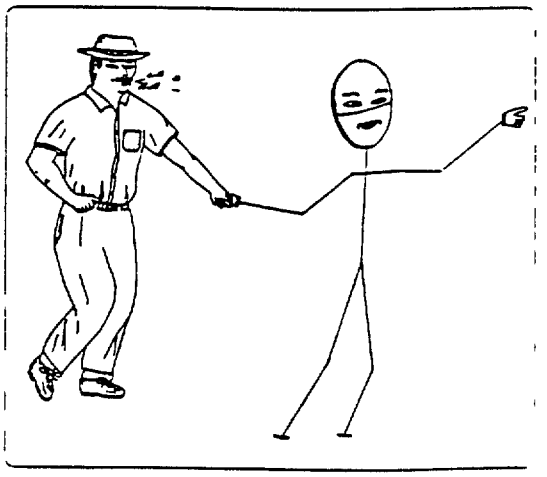


¿Cuantas veces y por cuánto tiempo tenemos que tomar el medicamento MECTIZAN?

La toma de medicamento involucra a la comunidad total, todos toman la pastilla, con la excepción de

- Mujeres embarazadas
- Mujeres dando de mamar a recien nacidos (menos de ~~seis meses~~)
- Niños que pesan menos de ~~15~~ kilogramos
- Personas enfermas

Aparte de estas personas, todas las demas de la comunidad debe tomar el medicamento una, dos o tres veces al año, conforme a la gravedad de la enfermedad de esa comunidad

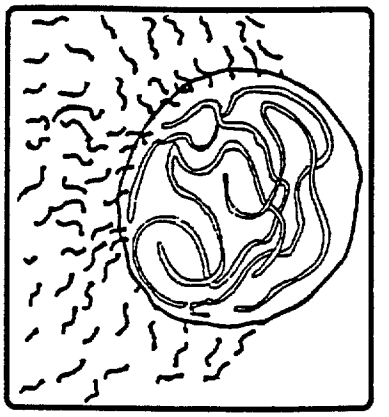


Don Mectizán le conduce en el camino de mejor salud

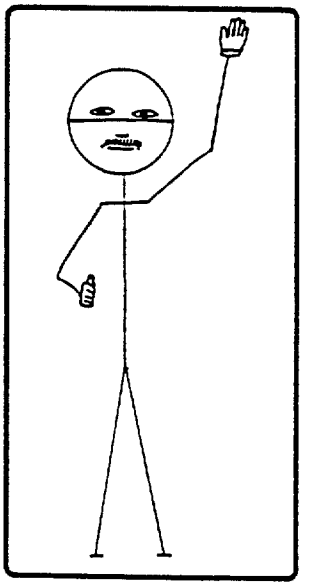
¿Por qué es necesario tomar el medicamento por varios años?

Sabemos que 10 ó 12 años es mucho tiempo para estar tomando un medicamento Pero tambien sabemos que el MECTIZAN no mata a los gusanos adultos envueltos en sus nidos

Esos gusanos adultos tienen larga vida, hasta 15 años Los gusano siguen reproduciendo gusanitos hijos durante todo ese tiempo



Es difícil matar a los gusanos adultos, peio el medicamento MECTIZAN acaba con los hijos



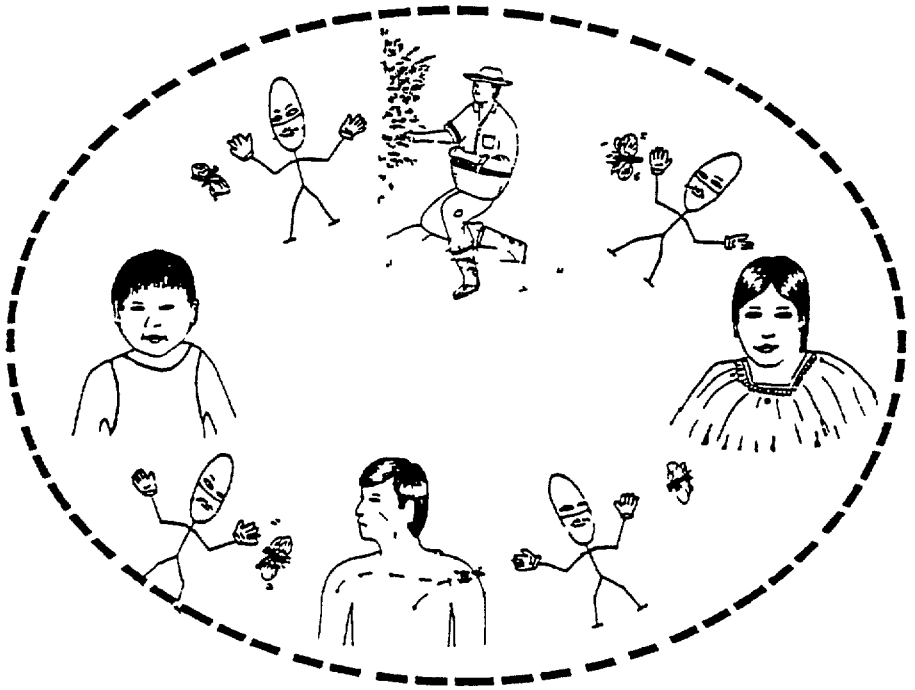
Si se sigue cumpliendo con el tratamiento durante los años necesarios los gusanos adultos moriran por si solos

Tomar MECTIZÁN no solamente me libra del mal de la filiaria, sino también participo en su eliminacion de esta comunidad.

Si yo tomo el medicamento, ayudo a que los niños no agarren la enfermedad

Tomar el medicamento hace imposible que los mosquitos chupen los gusanitos hijos cuando nos pican

De esta manera, se bloquea el **Ciclo de Transmision**



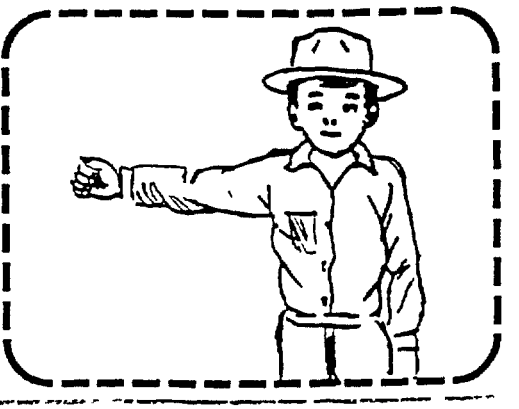
Al cabo del tratamiento de algunos años, podremos realmente librar esta comunidad del mal de la filiaria

El medicamento MECTIZÁN es bastante fuerte. ¿Hay algun mal efecto que se siente al tomarlo?

A veces si se sienten molestias despues de tomar el MECTIZÁN, pero no son graves

La razon del por que algunas personas sienten malestar a veces es que tienen muchos gusanitos en su cuerpo, y debido a tantos muriendose repentinamente despues de tomar la pastilla, esto es lo que causa picazon, hinchazon, dolor de cabeza, y a veces fiebre

Lo bueno es que los efectos duran poco tiempo, como uno o dos dias



Despues de esto, se retorna a la normalidad y se siente mejor por haber acabado con tanta Filiaria en el cuerpo

Durante el tratamiento, los profesionales de salud estan al tanto de ayudar a aliviar los malestares que se pueden estar sintiendo Tienen medicamentos que bajan los efectos de tanta filiaria muriedose en nuestros cuerpos

Aparte de acabar con gusanitos de la filiaria, ¿Hay otros beneficios en tomar MECTIZÁN?

Afortunadamente sí —el Mectizan — nos libra de otras lombrices tambien

Cuando se hace popó, se puede ver las lombrices

Esto nos quita los dolores de panza
—especialmente a los niños!

DON MECTIZÁN NOS APOYA — ACUDE AL CENTRO DE DISTRIBUCION DE MECTIZÁN.

172

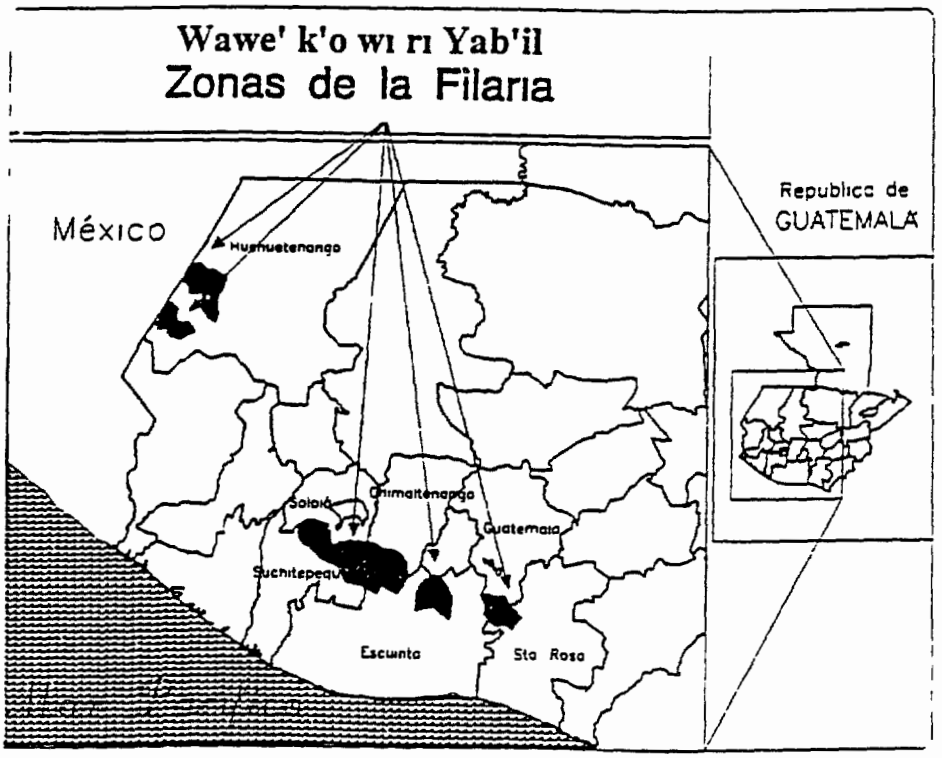
Se termino de imprimir en Imprenta Nawal Wuj en
febrero de 1996, consta de 2,000 ejemplares,

¿ACHIKE RI FILARIA?

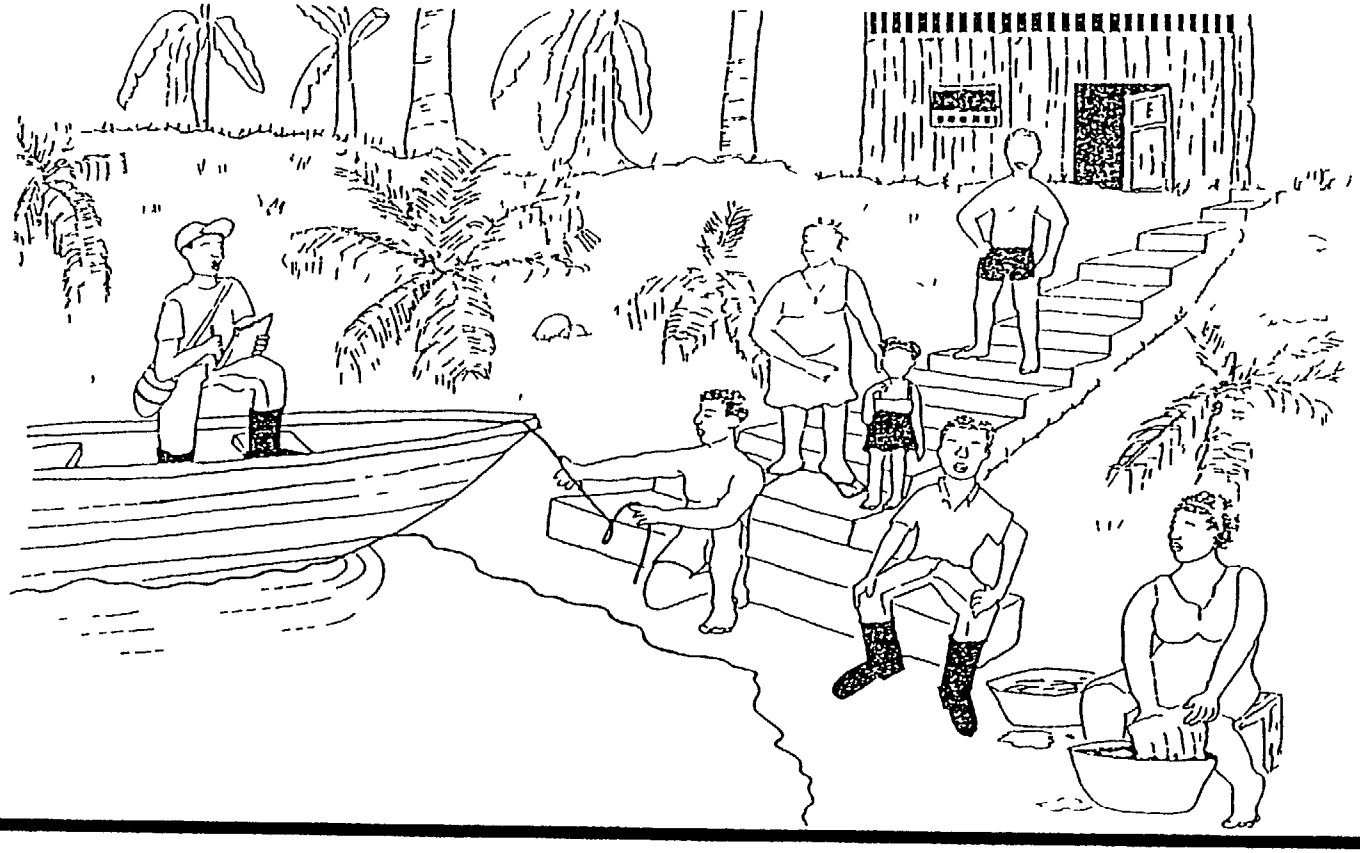
Pa ri Ixımulew k'ıy taq tınamıt akuchı k'o wı rı yab'ıl rub'ını'an Fılarıa Re jun yab'il re' yermoyırısaj chuqa' nuya' k'ayewal pa rı kıtz'umal Chupan jun retal ulew nıntz'et rı taq tınamıt akuchı k'o wı rı k'ayewal

¿QUE ES LA FILARIA?

En ciertas partes de nuestro pais existe una enfermedad llamada "Filaria" Esta enfermedad causa ceguera y problemas de la piel En el mapa se puede ver las partes del pais en donde la poblacion es afectada.

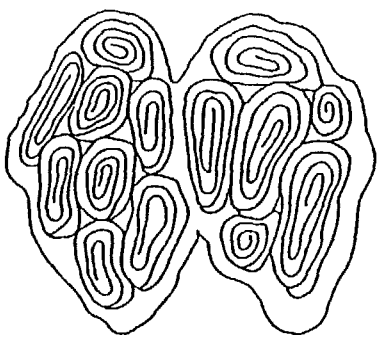


a cualquier persona le puede dar oncocercosis



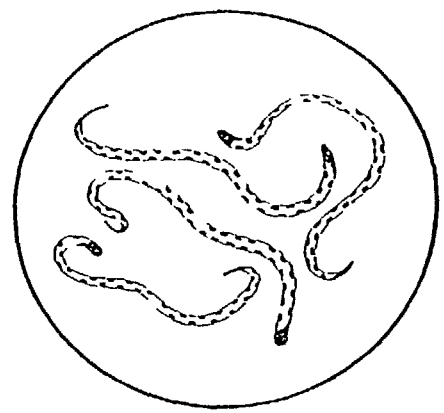
el culpable de la oncocercosis es este gusano

Este es un tronquito
que le sacaron a una persona
con oncocercosis



Está cortado por la mitad
para poder ver
los gusanos enrollados

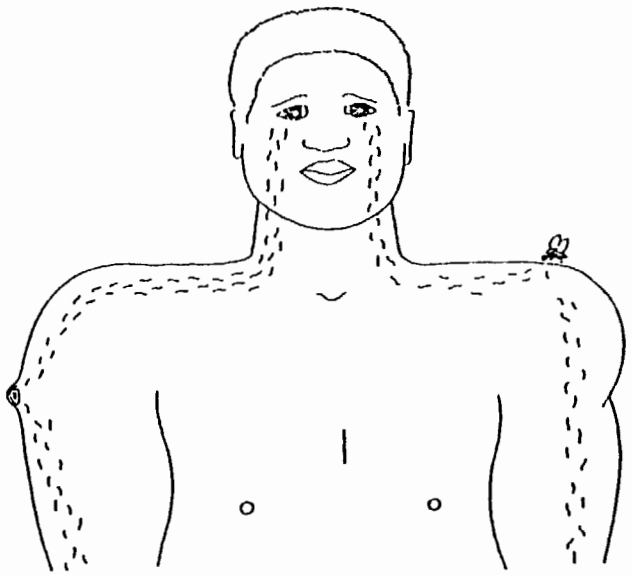
Este es un microscopio
para poder ver
los gusanitos chiquitos



Estos son los
gusanitos chiquitos

el gusano entra al cuerpo cuando el mosco caballo pica

el gusanito al
crecer se enrolla
y forma troncos

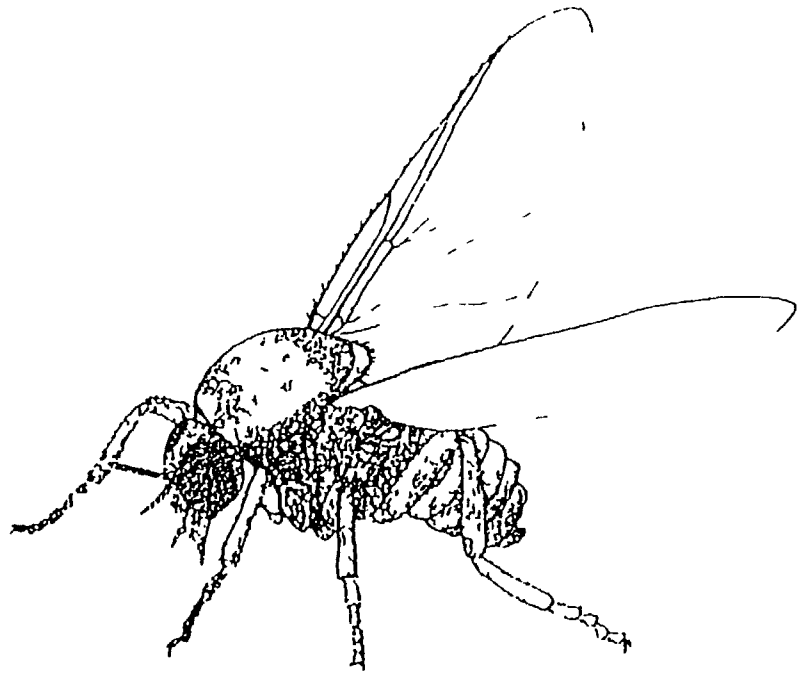


el mosco caballo pica
y mete en el cuerpo
unos gusanitos chiquitos

los gusanitos se reparten
por todo el cuerpo
y llegan hasta los ojos

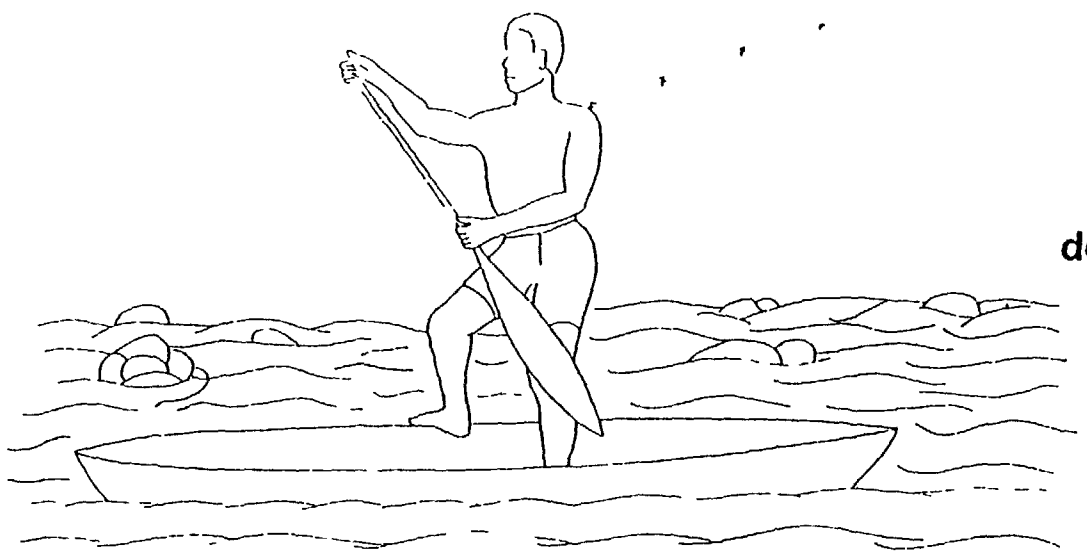
3

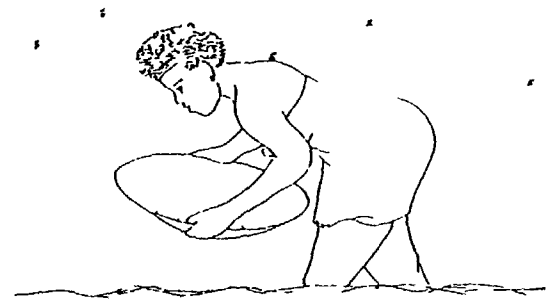
este es el mosco caballo
que pega la oncocercosis



así nos llega la oncocercosis

primero, el mosco caballo le pica a una persona
que tiene gusanitos en el cuerpo y se los chupa



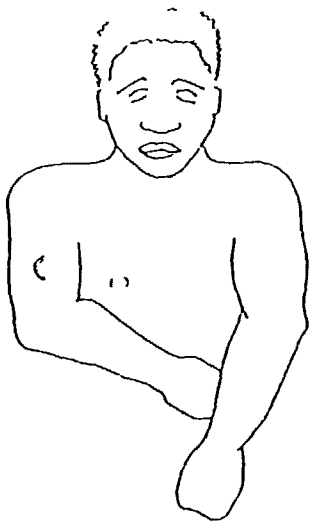


después, el mosco caballo vuela,
le pica a una persona
que está sana y le mete
los gusanitos en el cuerpo

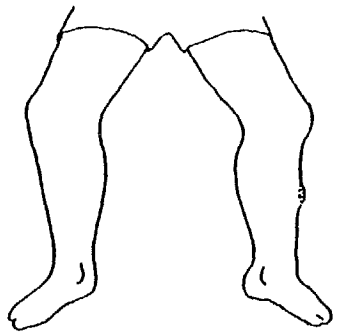
5

así se ve la oncocercosis en la piel

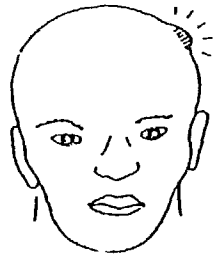
una persona puede tener troncos



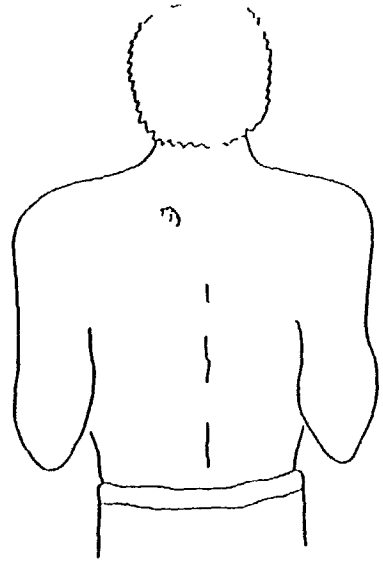
en el brazo



en la pierna

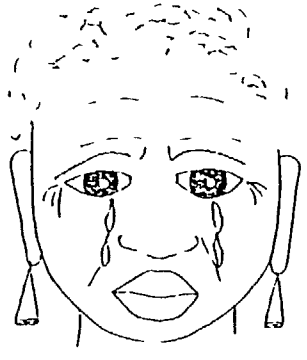


en la cabeza

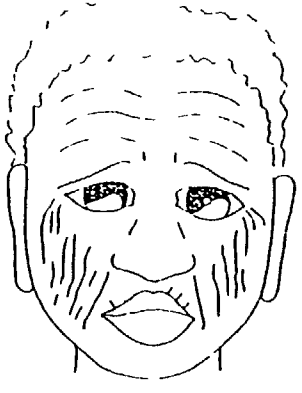


o en la espalda

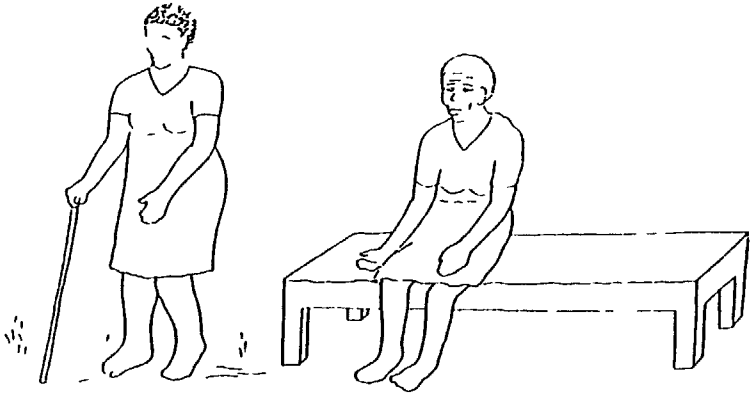
así se ve la oncocercosis en los ojos



al principio los ojos
se ponen muy rojos
y lloran todo el tiempo

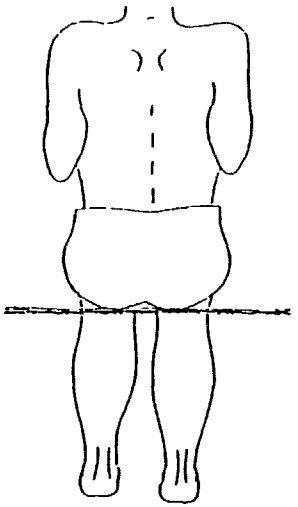


después se comienza
a ver borroso

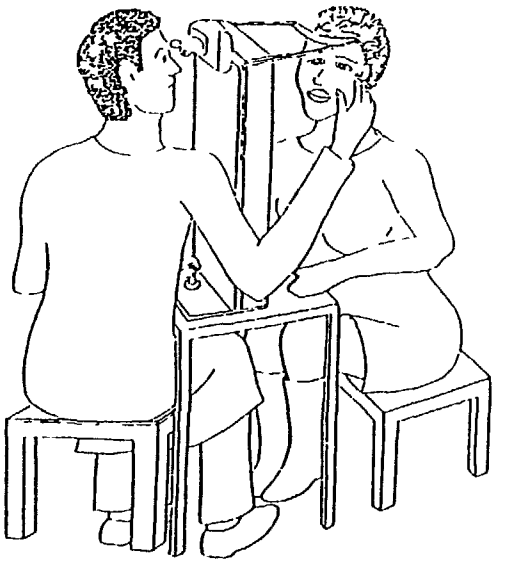


y al final, la persona se queda
completamente ciega

así se sabe si una persona tiene oncocercosis

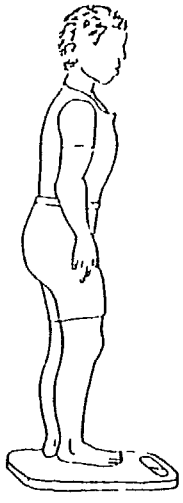


sacando pedacitos de piel de la cadera
y de la espalda para mirarlos al microscopio

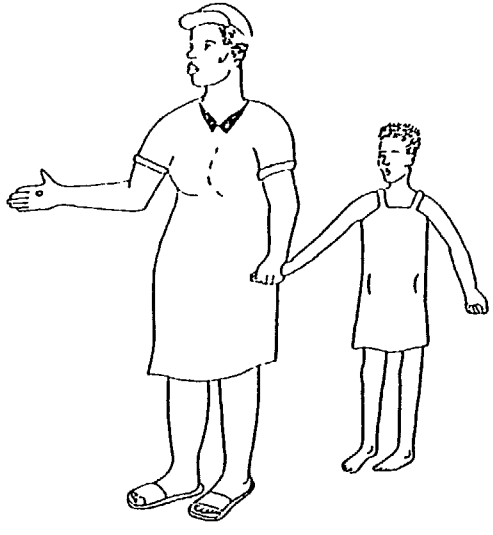


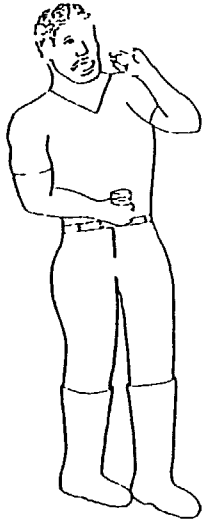
haciendo un exámen especial
en los ojos

así se cura la oncocercosis



primero hay que saber
cuánto pesa cada persona



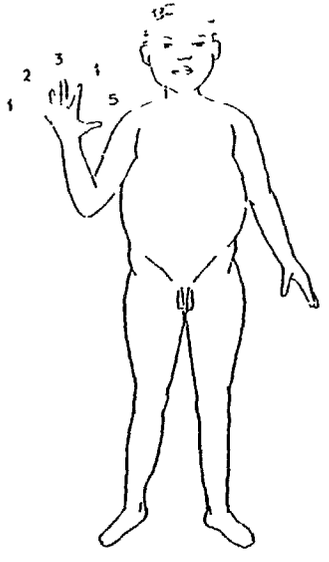


luego se le da a cada persona la pastilla
de acuerdo con su peso

la pastilla hay que tomarla 2 veces al año durante 10 años

mujeres embarazadas y niños menores de 5 años no pueden tomar la pastilla

las embarazadas tienen que esperar a salir del parto para poder tomar la pastilla

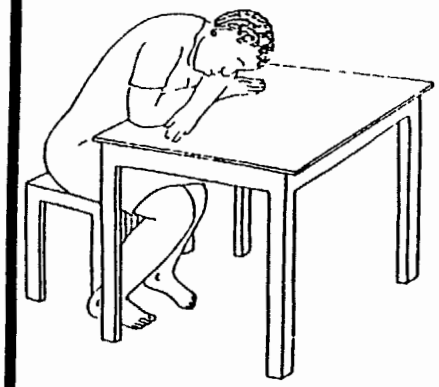


los niños tienen que cumplir 5 años para poder tomar la pastilla

la pastilla también sirve para

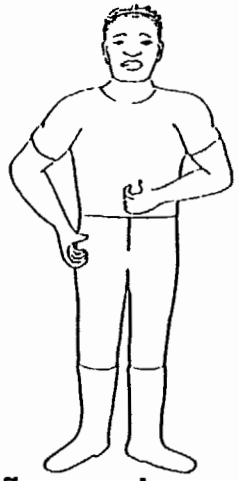
matar todos los gusanos que la gente tiene en la barriga

la gente puede sentir algunas molestias después de tomar la pastilla



malestar

dolor de cabeza



piquiña en el cuerpo

hinchazón en los ojos

todo esto se acaba rápido

represamiento y flujo repentino
-Control de la vegetacion
-Adecuado uso de la tierra
-Proteccion de casa y personas

BENEFICIOS DE LA SALUD

El control de plagas vectores de enfermedades perjudiciales a la salud humana, reporta grandes beneficios no solo a las comunidades, sino a los paises en general, ya que se logran importantes ahorros en gastos por atencion y servicios de salud, aumenta el rendimiento general de la poblacion al disminuir la tasa de mortalidad, la incapacidad por padecimientos y debilidad Previniendo y controlando las enfermedades de importancia sanitaria, se generan mejores condiciones en la calidad de vida, para un sano desarrollo de los pueblos

UMITASC

TEKCHEM

Oficinas en la Ciudad de Mexico Av Jalisco No 180 3er piso Col Tacubaya Mexico D F
Planta Km 314 Carretera Panamericana Salamanca Gto
Atencion a clientes
Mexico D F 91 (5) 272 22 21 272 17 78
Planta 91 (464) 8 18 87 8 17 77

BOLETIN TECNICO DE SALUD PUBLICA

Publicacion de TEKCHEM S A de C V No

CONTROL DE PLAGAS EN SALUD PUBLICA

En todo el mundo se realizan importantes esfuerzos para prevenir, controlar y erradicar enfermedades que afectan la salud de la población, ya que si no se controlan oportuna y adecuadamente, pueden provocar epidemias de consecuencias invaluables

Un sin numero de insectos, acaros, roedores y moluscos son transmisores de enfermedades que dañan al ser humano Unos son parasitos externos como las chinches, piojos, garrapatas y mosquitos, otros son cohabitantes del medio ambiente, consumiendo y contaminando los alimentos de la poblacion, como las cucarachas y moscas Los casos mas conocidos de transmision de enfermedades por estos insectos son el Paludismo transmitic por el mosquito Anófeles, la Enfe medad de Chagas cuyo vector e un *Triatomino* y el Dengue, cuy vector es el *Aedes aegypti*

LUCHA INTEGRADA CONTR PLAGAS EN SALUD PUBLICA

Para lograr un adecuad control de plagas vectores o tran misoras de enfermedades de im portancia sanitaria en la poblacio se requiere llevar a cabo diversa practicas que interrelacionada permitan incrementar la eficaci en el control En todas las accione la participacion de la poblacion civ es fundamental para lograr el ex to

En la lucha integrada cor tra plagas en salud publica, tre son los factores esenciales qu

rigen las acciones del control
-El control biologico
-El ordenamiento ambiental
o practicas culturales
El control quimico

CONTROL BIOLOGICO

Existe un considerable interes en el uso potencial de predadores y patogenos para el control de vectores y plagas en el Continente Americano No obstante que se han realizado muchos experimentos de laboratorio y pruebas de campo, solo un pequeño control biologico se esta realizando

Los peces larvivoros especialmente el *Paecilla reticulata* y el *Gambusia affinis*, han sido utilizados para el control larvario de Anofelinos *Aedes aegypti* y *Culex quinque fasceatus* La bacteria *Bacilius Thuringensis* H-14 ha sido probada en varios paises para el control de Anofelinos y en Colombia para el control de *Aedes aegypti* mostrando una corta actividad residual (10 dias)

Se han hecho otros ensayos con *B sphaencus Romanomermis culicivorax Toxorhynchites moctezuma, Mescocyclops aspercorus, Coelomomyces asorophora* y *Lagenidium giganteum* para el control de vectores y se esperan resultados positivos El control biologico de plagas vectores ha sido de aplicacion limitada, debido a sus altos costos de investigacion, desarrollo y operacion

CONTROL QUIMICO

La mayor parte de las acciones de control de vectores en America, es a base de insecticidas El tratamiento residual intradomiciliario con suspenciones de polvos en agua, es el metodo mas utilizado en los programas contra el **Paludismo (Malaria)** El DDT es aun el insecticida que se aplica en la mayoria de estos programas, bajo la supervision de las autoridades sanitarias oficiales

El uso del DDT en programas de salud publica, aun se justifica debido a su excelente relacion costo/beneficio Su aplicacion supervisada y dirigida hacia paredes, elimina el riesgo para la salud y el medio ambiente

ORDENAMIENTO AMBIENTAL Y PRACTICAS SANITARIAS

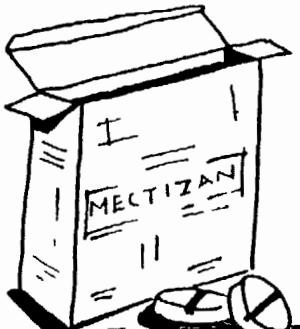
El ordenamiento ambiental tiene su fundamento en el saneamiento basico, entendido como el conjunto de acciones dirigidas a controlar los medios de reproduccion de la fauna nociva transmisora Comprende el manejo de deshechos, vegetacion, tierra, agua, alimentos y vivienda, para evitar la existencia de medios o ecosistemas favorables para el desarrollo de los vectores en sus diversos estados biologicos, basados en los siguientes puntos de aplicacion

-Modificacion del medio
IngenieriaSanitaria, Avenamientos Agricolas, Saneamiento por Especies
-Alteracion topografica
-Drenaje urbano y rural
-Alteracion de las corrientes de agua
Fluctuaciones del nivel de agua,

La oncocercosis es curable

Si tienes nodulos o "bolitas", o sabes de alguna persona que las tenga, acude con las brigadas de campo o a la Unidad de Salud mas cercana para tu atencion y tratamiento medico y quirurgico

Actualmente se cuenta con el Mectizan, medicamento que produce molestias minimas La dosis recomendada por el medico es tomar dos tabletas cada seis meses El tratamiento puede durar quince años y es muy efectivo contra el parasito



LA LUCHA CONTRA LA ONCOCERCOSIS CONTINUA AHORA HACIA SU ELIMINACION!!!

¡¡¡PARTICIPA!!!

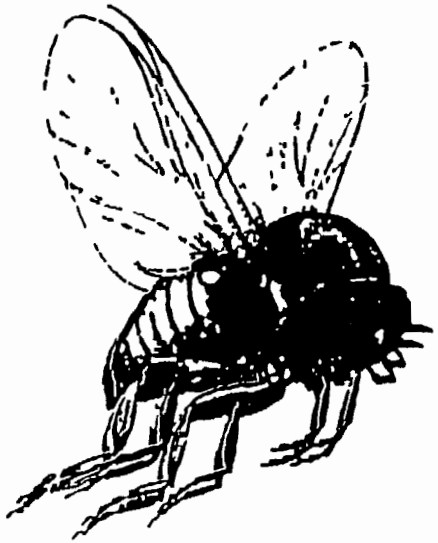
Si vives o trabajas en Oaxaca o Chiapas, las zonas afectadas por la enfermedad, solicita tu tratamiento preventivo de tabletas de Mectizan a las brigadas de campo contra la oncocercosis

PROTEJAMOS NUESTRA SALUD

ISSSTE IMSS DIF

SISTEMA NACIONAL DE SALUD

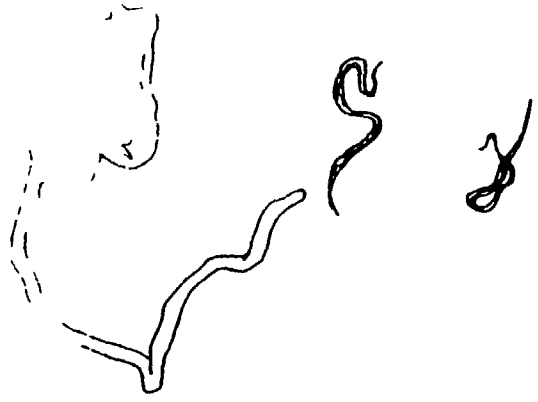
eliminemos la **ONCOCERCOSIS**



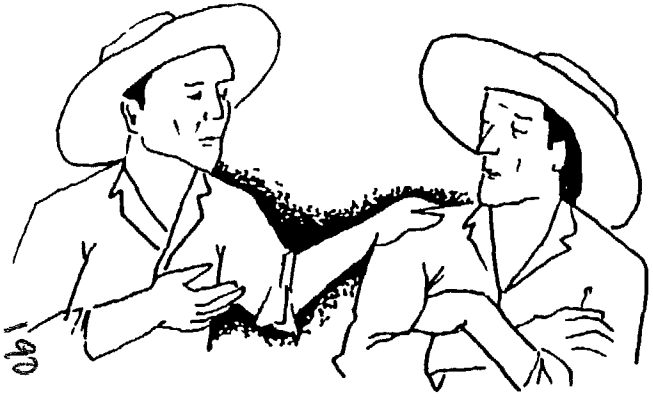
SECRETARIA DE SALUD

DIRECCION GENERAL DE MEDICINA PREVENTIVA

La Oncocercosis es una enfermedad parasitaria, cronica, producida por un gusano de color blanquecino, delgado, largo y semirredondo conocido como *Onchocerca volvulus*", tambien se le denomina filaria, la cual llega a vivir hasta 15 años



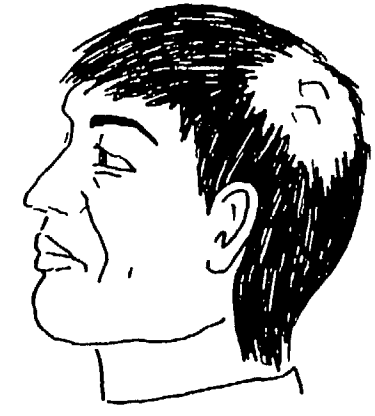
Cualquier persona puede ser afectada por Oncocercosis si vive en localidades donde haya personas que padezcan la enfermedad y los mosquitos transmisores



La oncocercosis se transmite de una persona enferma a otra por la picadura de una mosca chupadora de sangre conocida como Simulido, Alazán, Rodador o Jejen que abunda en las áreas donde se cultiva el café

Al ser introducido por el piquete de la mosca, el parasito bajo la piel puede moverse a cualquier sitio del cuerpo pero prefieren la cabeza y el tronco en donde al crecer forma nódulos, que son "bolitas" con el parasito adentro, y al reproducirse genera miles de microfilarias o filarias hijas que se distribuyen por la piel hasta los ojos

Las manifestaciones tempranas de la enfermedad aparecen en la piel y los ojos, y con el tratamiento desaparecen Sin embargo, si el enfermo no es tratado, tiempo despues aparecen lesiones tardias no curables llegando a producir ceguera



CUIDADO CON LA ...

ONCOCERCOSIS

Causa ceguera

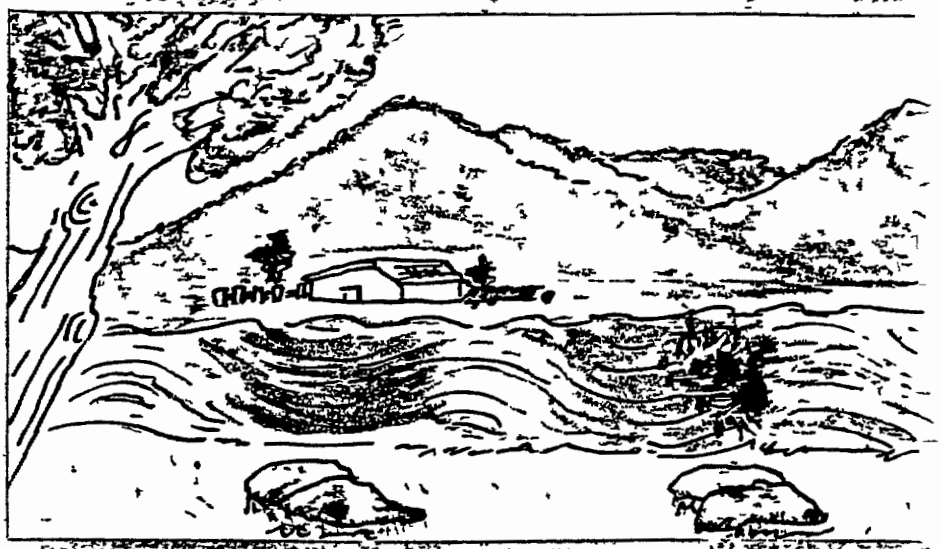
Si te aparecen bolas en la cabeza y en el cuerpo acude a la unidad o a la brigada de salud

DIF

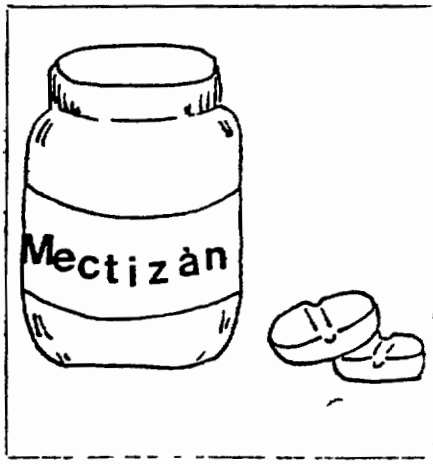
SISTEMA NACIONAL DE SALUD

Este mosco nace, vive y se reproduce en

- Arroyos o pequeñas corrientes



- Cafetales



Si vives o trabajas cerca de estos lugares
Solicita tu tratamiento con tabletas de mectizán

APPENDIX L

OEPA Plan of Operations 1997

OEPA

PLAN OF OPERATIONS

1997

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CONTENT

IV Activities (Timeline)

V Project Organization and Execution

VI Monitoring and Evaluation

- A Internal Regular Evaluation
- B PEC
- C Midterm Evaluation
- D Reports

VII Financial Sources

VIII Budget

ANNEXES

* Table for training activities and special events
* OEPA HQ and Regional Organizational Organigram
* Plan of Action of LTC's 1997

I. BACKGROUND

The Regional Onchocerciasis Elimination Program for the Americas is an initiative started in 1990 as a concerted effort carried out by national authorities, NGOs and prestigious institutions

The River Blindness Foundation started to support some activities of some national efforts since the late 80's

In January 1993, after two Inter American conferences on this theme, the program as an initiative was launched with the political support of the authorities from the endemic countries

On September 7th, 1994, the Nonreimbursable Regional Cooperation agreement between the River Blindness Foundation and the Inter American Development Bank was signed

The purpose of the contributions were defined to be used to cooperate in the financing of the expenditure required for the executions of a project of regional technical cooperation for the elimination of the onchocerciasis in the Americas

The project was carried out by The River Blindness Foundation through the Onchocerciasis Elimination Program for the Americas till May 31st 1996

Since then, The Carter Center Inc assumes the responsibility for the execution of the project

Documented through the four previous semester reports and after four Inter American Conferences after the signature of the Agreement between IDB and The River Blindness Foundations, it is very clear that there are some milestones and achievements of the regional initiative, as well as the national development of the program in each country

First of all, the most important milestone is that now there exist six national programs in the six countries for the struggle for the elimination of clinical manifestations of the onchocerciasis. Also it is important to mention that all six national programs have been working on an integrated scheme for the delivery of services and following primary health care approach The countries authorities have been able to integrate recommendations from guidelines on Epidemiology and Health Information Systems (HIS), recommendations from the different task forces and through workable and efficient structure and organization the programs have been able to conduct epidemiological studies as well as to develop realistic national plans and efficient reporting systems which allow to identify better the magnitude and extent of the problem and to monitor the different activities and the possible impact of the program

This plan of operations is developed as a tool to identify the different activities to be carried out by the OEPA Regional Office as well as the technical and financial support to be provided to the six national programs

II. OBJECTIVES AND GOALS.

The goals and objectives of the regional program have not been changed Quoted the main purposes and objectives of this grant of the regional initiatives are

1 "The purpose of the project is to eliminate onchocerciasis as a public health menace threatening four million people in the Americas through the implementation of effective, safe, and locally sustainable programs for the distribution of ivermectin (Mectizan) in all endemic communities, within the framework of a coordinated, regional strategy

2 The specific objectives are to (1) train national specialists, community-based volunteers and local health authorities, (2) establish a standardized health/management information system (H/MIS) that shall provide a common data base, facilitate evaluation and quality assurance, and enhance the overall primary health care infrastructure, (3) develop a computerized monitoring program for the improvement of the information systems and to support epidemiological surveillance, and (4) establish a field research network among the affected countries to stimulate operational research activities leading to improved program implementation and sustainability '

Being 1997 the second year for Phase II, OEPA for this period will be mainly devoted to consolidate the national programs, and to strengthen the binational technical cooperation either by the follow up of formal agreements or by stimulating and supporting technical cooperation activities Also during this year OEPA will start to work on the preliminary steps for the definitions of criteria for certification of the elimination of onchocerciasis

III. COMPONENTS

1. Regional Management

Financial Management

Regional financial management is conducted through a budgeting and expenditure approval process that is improved each year as part of a gradual introduction of public administration techniques to the countries In 1997, the focus of system improvements will be on two areas

a Task level counterpart expense identification
b Standardized estimation of repetitive activities

In 1996, a system of reporting country counterpart expenditures was standardized at the annual report level In 1997, OEPA will begin to collect estimates of counterpart support when the activities, or tasks, for the year are planned As tasks are completed, final estimates will be requested as comparisons to support levels estimated at budgeting time This feedback will allow OEPA to sensitize country directors to the need to place values on the support they receive from ministry and other sources in the accomplishment of OEPA-supported activities

The process of elimination of onchocerciasis is subject to standardized tasking As a part of the program goal of establishing regional methods for public health, OEPA has supported workshops to develop standard procedures for field epidemiology, entomology, and ophthalmology for onchocerciasis It is only a short step from procedures standards to standardized task descriptions with modular budgeting Our goal is to produce a shadow budget for recommended tasks for each country as a guide for budget submission evaluation

Banking

In early 1997 banking will change over to the new executing agency, Global 2000 River Blindness Program of the Carter Center (GRBP) Main tasks will be

a New US Dollar bank accounts will be opened at Nations Bank in Atlanta to hold IDB advances and other dollar support funds

b The Nations Bank has the ability to hold foreign currency accounts so we will use this ability to close the Citibank (Mexico City) account and open a peso account in the name of GRBP

c The Lloyds Bank (Quito) sucres account will also be closed upon the receipt and expenditure of the final support funds in sucres

d Finally, the Lloyds Bank (Guatemala) account will be re-registered in the name of GRBP by filing a notice of change of legal entity for the branch office of River Blindness Foundation

Program Management Agreements

The new agreement with UNDP Caracas will allow us to support Venezuela more efficiently UNDP has agreed to accept deposit of funds from OEPA with specific instructions for their use in support of the Venezuelan National Plan This agreement allows OEPA to deposit US dollars with UNDP in New York for expenditures in bolivares in Venezuela A similar agreement in Brasil with UNDP was renewed for an additional year

Planing

From now on, the new Plan of Actions for every country will be drafted initially since August and September The task in this area is to have six National Plans on their preliminary versions presented before the IACO meeting scheduled for November 1997

Reporting

OEPA will provide all necessary technical assistance in order to have the Annual Report of Activities presented by the national authorities in November

Staff

A new Administrator will be hired on April 1997 and a training and over lapping period will be provided to the new Administrator under the coordination of the actual Administrator and the Director

A training course for financial officers of each of the six national programs will be standardized financial system will be conducted in Guatemala

Communications

OEPA will stimulate and provide technical assistance to the national directors that are still pending for the establishment of an internet link

Guidelines

The actual guidelines on Epidemiology and Health information (community listing) will be re-edited, printed, and distributed Some of them as the Manual of Planing and Reporting, as well as the Community Inventories will be reviewed, the epidemiological guideline will be only re-edited

Publications

(Articles and News Letters)

OEPA will stimulate the drafting and publications of technical articles on onchocerciasis The tasks for 1997 are

a One article for the Weekly Epidemiological Record (WER) to be drafted by OEPA staff
b At least one WER article to be drafted by national teams (6 articles in a year)
c Supporting the draft and the publications of at least three technical articles

Coordination

OEPA will coordinate the following activities in 1997

a Ten technical/financial meetings with IDB staff of IDB office in Guatemala
b Two technical/financial meetings with CCI officers
c Two meetings with the PCC members
d The IACO meeting to be held somewhere in Colombia in 1997
e The MIDTERM EVALUATION in March
f The Program Evaluation Committee meeting in August 1997

2. Epidemiology

Country visits

The LTC on Epidemiology will perform four trips for technical advisory services to Venezuela including separate visits to the Central Northern focus and to the Southern Focus One of this trips will be jointly coordinated for a binational technical cooperation follow up for Brasil and Venezuela

Four trips to Brasil including two to Brasilia, one to Manaus, and one to Boa Vista and the last one as mentioned before, coordinated with the Venezuela trip for a binational event

Two technical trips to Colombia, one of them including inside visits to the locality of Naiciona in the Municipality of Lopez de Micay

Two trips to Ecuador, one to the headquarters of the National Program in Quito and another one as a follow up of a coordinated effort on binational technical cooperation Colombia-Ecuador

Two trips to Mexico, one to Oaxaca and Tuxtla Gutierrez and one to the headquarters of Onchocerciasis Program in Mexico City

Outcomes

As a result of the technical cooperation provided during the trips the following products will be expected

a One report for every national program related to progress assessment
b Specific recommendations to formulate the six national programs for epidemiological assessment and evaluations ongoing and expected or planed for 1998
c Progress assessment reports will be drafted on binational achievement

Epidemiological Assessments including Entomological and Ophthalmological Evaluations

a All the epidemiological assessments are the responsibility of the National Program authorities in each of the six (6) endemic countries
b The EPI-LTC will verify the adoption of uniform guidelines for the epidemiological characterization of onchocerciasis as stated in the first Annual Plan of Operations of OEPA (1994) and in OEPA's epi-guideline document supplied to the program authorities
c The EPI-LTC will provide assistance upon request by the program authorities on the se of standard epidemiological assessment methods in onchocerciasis
d The EPI-LTC will verify progress and analyze the outcome of the proposed epidemiological evaluations

Outcomes

a Reports (progress assessments)
b Recommendations
c Technical assistance for planing

Rapid Epidemiological Assessments (REA)

This EPI-LTC specific task will focus and expect results on the implementation of the following REA's scheduled by the programs for 1997

Venezuela	296 (280 in the North, 16 on the South)
Brazil	2 (Hub communities of Xiriana and Alto Catrimani)
Colombia	1 (Nariño, Municipio de Barbacoas)
Ecuador	Number to be determined / Information requested on Comunidades de Palmera, Palma Real, Canton de Shushufindi, Provincia de Sucumbios, Comunidades de Hoja Blanca, Canton Eloy Alfaro y Las Pavas, Canton Quininde, Provincia de Esmeraldas
Mexico	16 (information requested on locations)
Guatemala	ND (information requested)

Thorough Epidemiological Assessments in Sentinel Communities (TEA / formerly refered to as Parasitological, Dermatological, Ophthalmological, and Entomological Assessments)

This EPI-LTC specific task will focus and expect results on the implementation of the following TEA's scheduled by the programs for 1997

Venezuela	22 (6 in the North, 16 in the South) 32 Rapid Ophthalmological Assessments (ROA 24 in the North, 8 in the South) 11 Rapid Entomological Assessments (RENTA 6 in the North, 5 in the South)
Brazil	None
Colombia	None
Ecuador	Endemic areas of Rio Cayapas, Rio Onzoles, Rio Canande, Rio Viche and Rio Sucio (Identification of communities to be determined/ Information rquested/ No ROA planned) RENTA included in the same 5 areas
Mexico	23 (information requested on locations) 8 ROA 16 RENTA
Guatemala	ND (PCC suggested Santa Rosa and San Vicente Pacaya)

Standardized Epidemiological Information, Data Base and Computerized Information Systems

The EPI-LTC has devoted special attention to the strengthening of the Epidemiological Surveillance Capabilities of the National Onchocerciasis Programs a component which is directly addressed by this task

Following programs have included an activity related to this component within their 1997 National Plans

- Mexico Venezuela Brazil, Colombia

The LTC will follow the implementation and progress made by all six programs on epidemiological surveillance in onchocerciasis

Workshops
Anticipates at least one binational Special Event per each pair of countries including IACO '97 If approved, this would represent a minimum of 4 Mexico-Guatemala Brazil-Venezuela Ecuador-Colombia and IACO

Support Activities
These include pending matters related to the purchase of equipment, STC contract status and other program related requirements contained in the plan

Technical Papers and Publications
As in the past, the PEI-LTC will continua to contribute in the WER Publication and in any other relevant communications upon availability of time

Guidelines
The epi-guideline will be re-edited on its final version Will be widely distributed amongst the operative (Epidemiologists, Directors, Supervisors) staff of the six countries and all concerned institutions

3. Health / Management Information Systems (H/MIS)

This Plan of Action is based upon an evaluation of each country done after visits by the Consultant, suggestion's presented at the VI Inter American Conferences on Onchocerciasis, the Task Force on GIS/MIS, and the specific request of each countries' Director in their own Plan of Action for this year Special attention has been given to the activities of those countries considered of programmatic priority due to the advance and effective coverage of the ivermectin distribution program, and to countries of strategic importance for the number of positive cases they report

Methodology
To meet the goals of the plan, the following methodology will be used

a All computerized applications will be developed using high level structured programming languages, with the help of relational data base management systems (DBMS) to handle the data assure its consistency and ease of use

b An analysis will be done before the development of software applications

c Industry standard normalization of data will be used for database and file design

d Any training sessions in the MIS/GIS area will be done using the hands on' concept The audience will be the end users of the System The consultant will emphasize doing the training in the actual workplace of the end users

e Country visits will be done to meet the specific goals, and after an agenda has been proposed to the Director of the National Plan, and OEPA's Director

The following activities in the Health Management of Information Systems are proposed for 1997

a Country visits

Expected Results
The LTC has schedule trips to Brazil (Establish Database/GIS), Colombia and Ecuador (Evaluate work done by local STCs), Guatemala (Georeference of Hyper and Meso-endemic communities) Mexico (Evaluate activities), Venezuela (Evaluate activities in REMO and GIS) A report will be produced, and presented to OEPA's staff at the end of each activity

- 2 trips to Venezuela
  - Initiation of the component for 1997, estate of equipment purchase, and activity logistics Visit to the Institute of Bio Medicine and CAICET
  - Actualization and follow up of proposals from the National Program to the Plan of Action for 1997 Visit to the MERO in Northern focus

- 2 visits to Colombia
  - Execution of the 1997 component, activity logistics for the STC and evaluation of results of Mr Roberto Saenz's consultancy GIS evaluation in Colombia
  - Participation in IACO '97

- 3 visits to Mexico
  - Begin with the 1997 component execution logistics of the activities of the component of Chiapas and Oaxaca
  - Actualization and follow up of the National Program proposals for 1997 Trip to Oaxaca and Chiapas

- 3 visits to Brazil
  - Data base, analysis, and Epi-Info management organization and integration to a GIS GIS workshop
  - Evaluation of the capability installed in Boa Vista and Manaus
  - Evaluation for the 1997 activities and the 1998 proposals

- 1 visit to Ecuador
  - Evaluation of consultancy results of Mr Marcelo Aguilar, evaluate Program s data base and GIS

- 1 visit to California, US
  - If accepted by the organizing committee, presentation in the XVII Annual Conference on GIS in San Diego, California

b Headquarters standard Health Information System

Expected Results
- A standard and easy to use and maintain Health Information System

c Provision of software and equipment for the Health MIS component of the National Programs

Expected Results
Give the National Programs adequate hardware and software to support their own Health Information System

d Collaborate as resource person on workshops on Health MIS in the countries

Expected Results
A Health MIS/GIS workshop will take place in Brazil in April The purpose is to consolidate the efforts they have been doing since last year, and to link their database to a GIS People at the Local Ministry of Health trained in Health MIS

e Building, creation or enhancing module to extract standardized data to be used in the OEPA headquarters data base

Expected results
The STC's in Colombia and Ecuador will be in charge of developing that tool In Brazil, it will be developed during the workshop In Venezuela, a copy of the file will do it because the database structure is the same In Guatemala it will not be possible because the program does not work at the community level In Mexico, it is still undecided because the LTC has not had the opportunity to check the existing structure

f Consolidation of Information Systems in the countries

Expected Results
The LTC will visit all endemic countries In Brazil, will work in cooperation of an STC to help in the consolidation of their Health MIS For Colombia and Ecuador, local STCs and end products have been identified In Venezuela will travel evaluate the consolidation of their Health Information System based on the file structure proposed by the OEPA LTC In the case of Mexico the Information Systems needs to be consolidated at the State level (Chiapas and Oaxaca) In Guatemala cooperate with local STCs in the development and

implementation of an electronic data keeping system to record data about treatment of endemic communities of years before 1997, and in the training of end users of an easy to use and maintain programs to report treatment data at the municipality level

g Standardization of quarterly data base for analysis of individual countries and the regional strategy treatment at risk population

Expected Results
The LTC, in cooperation with the LTC in epidemiology and the Expert Advisor will regularly gather and standardized quarterly treatment data from the six endemic countries and produce a consolidated document for reporting purposes

h Use of pen or other portable computers as data gathering instruments in the field

Expected Results
A proposal to use this field proved technology as a data gathering alternative in at least one National Program

4. Health Geographic Activities

a Country visits country visits will be the same described for 3 - a on HIS

b Create an inventory of GIS technological capabilities developed in the countries

Expected results
A list of different capabilities that each country can do about GIS (Production of digital maps, production of thematic maps, spacial analysis, georeference of communities, maintenance of a community inventory)

c Monitor the implementation of a GIS in all endemic countries

Expected results
Support local GIS in every country and produce a report to the Director at the end of the year Short Term Consultants have been identified and contracted to develop GIS capabilities in Colombia and Ecuador The LTC will need to travel to these countries to assess that quality work has been done

d Inventory of equipment donated and required for GIS activities

Expected results
During visits to the six endemic countries assess all inventory donated by OEPA and equipment that is still required to support GIS operations This includes portable computers antennas, GPS units, color printers, and software licenses

e Production of maps

Expected results
Supervise the production of digital maps by the Regional Mapping Center, and any other GIS Center Supervise the production of thematic maps printed at the Regional Mapping Center to assure its accuracy Assure that maps produced at other GIS Centers are accurate and comply with minimum quality standards Increase the area coverage in quantity, and improve the quality of digital maps for those countries that requested them Thematic maps with treatment data and epidemiological data of the programs

f Workshops on GIS

Expected results
To optimize resources, after the implementation of the Health Information System, the LTC in Information Systems will conduct a workshop and help in the installation of a Health Geographic Information System for local authorities and end users in Boa Vista and Manaus, Roraima and Amazonas states in Brazil

g Review of new hardware and software to support GIS activities

Expected results
The LTC will constantly review periodicals and keep up to date in developments of products that can be of help in the support of the six endemic countries

h Implementation and monitoring community inventory

Expected results
The LTC will travel to the six endemic countries to help the authorities of the six National Programs in the implementation and monitoring of the community inventory This includes trips to the two endemic States in Mexico Ecuador Colombia Venezuela, Brazil, and Guatemala

Other activities related to GIS

- Present a paper at the V Latin American Congress of Tropical Medicine (CLAMT) on GIS and it's use in Public Health Problems

  Expected Result
  Abstract was written and sent for consideration in 1996 The Abstract has been accepted A written invitation by the President of the Conference Committee has been received The Consultant will present the products developed in the implementation of a Regional Onchocerciasis Geographic Information System

- If accepted by the Conference Committee, Present a Paper on GIS as Public Health tool in Developing Countries at the XVII Annual Environmental Systems Research Institute User Conference

  Expected Product
  Abstract of the Conference was written and sent for consideration in 1996 Acceptance is pending The goal is to present the products developed in the implementation of a Regional Onchocerciasis Geographic Information System

- Georeference hyper-endemic and meso-endemic communities, hospital, health centers, health posts and posts of health volunteers in the endemic zone of Guatemala

  Expected Product
  Files with geo-reference readings (latitude, longitude, altitude) of hospitals, health posts, health centers, volunteer health promotor's sites of any kind, and endemic communities The data gathered will be incorporated in the Community Inventory of Guatemala Increase the coverage of small endemic communities in thematic maps that currently do not appear on available 1 50,00 scale paper maps because of its size

- Present the advance of the Health MIS/GIS components of the project in IACO 1997

  Expected Results
  Present the current advance of both Health MIS and GIS components at the conference

5 Onchocerciasis Health Education

Introduction
This area is actually uncovered by an LTC, however activities identified for this technical component are mainly related to the continuous technical support to the country programs for the development, strengthened or implementing methodologies on Health Education toward onchocerciasis to all six endemic countries with emphasis in Guatemala Venezuela, Colombia

and Brasil oriented to the health promoters and community volunteers

Methodology
In order to achieve some success, OEPA will work on the strategy of hiring local STCs and the appointment of the new LTC Therefore, the main activities related to Health Education are

a Country Visits One visit to each country to participate on technical discussions with the local staff on the development, enhancing, testing, and implementation of methodologies and Health Education materials for health promoters and community volunteers

Expected Results
Six (6) 1-or-two-day panel discussions developed, one on each country

(NOTE In Guatemala, the panel discussion will be developed in Guatemala City)

b Identifying, recruiting, and contracting of STCs for Guatemala, Venezuela, Colombia, and Brasil

Expected Results
Three (3) Short Term Consultants hired

c Identifying, recruiting, and contracting a new LTC

Expected Results
LTC recruited after March and Terms of Reference described and adjusted accordingly

d Identifying and training of promoters, community volunteers and supporting national activities for the development of the methodology through pilot groups in Guatemala, Venezuela, Colombia, and Brasil

Expected Results
One pilot training course for health promoters and community volunteers, developed in Guatemala, Venezuela (Norther focus), Colombia and Brasil Report and disseminations of results of the pilot course

e Development of a minimum of 5 health education messages containing basic epidemiological information to convince and promote better attitude towards ochocerciasis in Guatemala Venezuela, Colombia, and Brasil

Expected Results
Five (5) short and effective messages developed tested and disseminated on onchocerciasis to be used commonly in all six endemic countries

f Promoting and supporting the Health Education materials and methodologies in the six endemic countries

Expected Results
Health Education material produced in Guatemala, Venezuela, Colombia, Mexico, Ecuador, and Brasil

g Technical advisory services to the counterpart officers in all endemic countries for the presentation of results for the Annual Report and the country Annual Plans

6. Knowledge, Attitude, and Practices. (KAP)

Introduction
This area is actually uncovered by an LTC, however, activities identified for this technical component are mainly related to the continuous technical support to the country programs for the development, strengthened, or implementing methodologies on Health Education toward onchocerciasis to all six endemic countries, with emphasis in Guatemala, Venezuela Colombia, and Brasil oriented to the health promoters and community volunteers

Methodology
The methodology for working on KAPs will be to select the countries were KAPs will be implemented (using the result of the survey conducted by Dra America de Fernandez in Oaxaca, November 1996)

Activities
a KAPs will be conducted exclusively in the countries and for the focus of populations that still show some reaction or negative attitude towards the treatment of Ivermectin namely some foci in Guatemala in Solola and Suchitepequez some foci in the Amazon basin and within the Northern focus in Venezuela

Expected Results
Implementations of one social study of KAPs in Brasil, one study in Guatemala, and one study in Venezuela

b Modify educational and motivational messages for those still resistant communities

Expected Results
Development of new versions or modified messages in two resistant foci in the region

7. Treatment and Monitoring for the Ivermectin Distribution Component

A Secure to obtain the "1996 Annual Activities Report

Introduction
Each of the countries' Annual Activities Report shows the action carried out by them, toward the accomplishment of goals proposed for the year

Methodology
Using the "Annual Report Guide", which is already handled by the Program Directors, follow up the accomplishment of this document and make it available for the Long Term Consultants, who will issue comments and recommendations to the OEPA's Director, to submit them to the consideration of the Program Coordinating Committee (PCC), funding agencies and other institutions

Expected Results
Six Annual Reports produced on December 1996 or not later than January 1997

B Annual Treatment Objective

Introduction
Based on specific table created to obtain relating information on treatment achievements by each of the six programs, will provide data including the annual treatment objectives and the goals targeted for each quarter of the year This information includes data on population to be treated, population already treated, the high risk communities (Hyper-endemic), and populations at all risk that were scheduled and treated, as well as their interaction, which will provide the coverage achieved

Methodology
There is a Table, designed by the Global 2000 Program/CCI to gather this information This form translated to Spanish is sent to the Program Directors, who fill it in and send it bach to the Regional Office Then, a consolidated is prepared and sent to the Global 2000 office, for its publication

Expected Results
A quarterly report for each of the six countries making a total of 24 reports a year

C Treatment Activities Condition

Introduction
PCC through OEPA's Director assigned to the Expert Advisor the Coordination of the Treatment Activities on each of the six countries, at national and regional level

Methodology

It is true that data from the countries' reports gave us a panoramic view of this component, but it is necessary to visit some representative areas of the six countries As it was mentioned before, this activity will be at different levels according to the country, number of visits and agenda to work will change from observation trips to development of training workshops

Expected Results

Report on the assessment of treatment activities on each country

D Funding Research for the National Programs

Introduction

Since the beginning, OEPA Regional Program sought funding from different institutions, obtained an initial support from the River Blindness Foundation (RBF) for US$ 1 million, then from the Inter American Development Bank (IDB) for US$ 4 million and US AID for US$ 100,000 Additionally, RBF and OEPA started a funding research in some countries Ecuador obtained additional funds in currency and supplies Guatemala established a Committee for that purpose, but it didn't work as expected, due to lack of coordination

Methodology

S it was established at the beginning of the Regional Program, when the fund raising was in charged of the RBF and OEPA it will be convenient to create a team form CCI and OEPA for that purpose After defining the uncovered financial needs from each country, this team will establish — with the National Program Directors' help — a local support Committee They will establish the actions to be taken identifying potential sponsors, who will receive detailed information about the funds administration The Program Directors should follow up local activities, counting with support from CCI and OEPA's personnel

Expected Results

Establishment of local fund raising committees in the countries that need additional financial assistance Provide financial and technical support to the National Programs to be established by the National Directors, CCI and OEPA

E Protocol Preparation for the Operational Investigation on Treatment with Two Combined Drugs

Introduction

Actually the elimination of clinical symptoms and the transmission disease is based on achievement of a higher coverage of patients with Mectizan (More than 80 %)

Justification

The Mectizan is a microfilaricidal drug with low or none effect under the currently used doses against adult worm o volvulus This means that

massive treatment should be established during the adult worm's life, which is approximately twelve years For that reason, it will be useful to find a microfilaricidal drug that could guarantee the elimination process in a shorter time

The Amocarzine has proved a 65 % efficacy against adult worm in patients with Onchocerciasis in Latin America, Ecuador, and Guatemala However, in Africa the same doses under the same circumstances haven't had effect

Methodology

Actually the use of Amocarzine is under the WHO's control and coordination It will be necessary to establish contacts as soon as possible, to evaluate the possibility of using these drugs

Expected Results

Establishment of a pilot study project with both drugs, following different treatment schemes

F Supporting OEPA interactions with other institutions

Introduction

OEPA keeps a tide relationship with different Organizations, some of them are financial institutions as IDB, other logistic ones as the Mectizan Expert Committee and PAHO, and other technical-administrative as CCI

Additionally there are two committees with which maintains a tighten relationship upon the Director's request, participation on the OEPA's Program Coordinating Committee (PCC) and OEPA s Program Evaluation Committee (PEC)

Methodology

The OEPA's Director in coordination with the Committees and Institution Directors schedule the meetings agenda They decide the participation for each Long Term Consultant and Senior Expert Advisor, although this participation is tightly related to their expertise's area

Expected Results

Upon request technical participation in five meetings (OEPA-PCC, OEPA-IDB, OEPA-PEC, IACO)and any other at OEPA s Director criteria

G Secure to obtain the 1998 National Plans

Introduction

The Annual Plan that contains the actions to be developed and the countries' budget is the basic document for the PCC and sponsoring agencies to have a better view of what plans countries will develop their goals time tables scheduled and implicated costs specially those required from OEPA

Methodology

Based on The Guideline to Elaborate the Annual Plan that was previously sent to each country follow up to secure obtaining the final version of the

Plans of Action This original document, will serve to the Long Term Consultants and OEPA's administrative office to present their recommendations to the PCC and to the National Programs themselves every year

Expected Results
Secure to receive the original version of the Plans of Action from the six countries that form part of the Regional Program and forward them to the Long Term Consultants

8. INSTITUTIONAL AND TASK FORCE GROUPS

In 1997 OEPA proposes the interaction with two existent groups and to start activities in the creation of an expert committee for the certification of the elimination of onchocerciasis

a PCC
The PCC by mandate has been playing an advisory and technical role mainly oriented to the revision and the coordination of some technical activities of the national plans and some technical aspects of the OEPA structure However, and due to the level of advance of the national programs and the sustainability gained by OEPA itself, the action to be coordinated and requested by the Director of OEPA related to the PCC are

a 1 Configuration of the PCC The denomination of two new members of recognized reputation and backgrounds to reemplace the vacancies left by former members who finished their period

a 2 To considerate and re-orient the role and the energy of all PCC members within strategic issues instead of programatic ones In this connection, the main strategic issue to be handled by the PCC on request of the Director of OEPA are

- The creation in 1997 of the basic action for the structure of a task force or a external committee oriented to certificate the elimination of onchocerciasis in the near future
- The creation of mechanisms, methodologies and basic strategics for structuring national groups to support technically and financially the activities of the national programs, oriented to sustainability
- The creation of an especial task force (ad honorem) and basic strategic and country profiles and proposals for training, especially in some technical areas which are critical for the sustainability of onchocerciasis programs such as entomology, ophthalmology laboratory analysis (PCR), health information system / geographical information system and training of health promoters

- To support OEPA on the refining of methods and systems of reporting activities for monitoring and evaluation of onco activities on day by day basis and periodical exercises of evaluation

b Mectizan Donation Program

Up to now the interaction between OEPA and the Mectizan Donation Program Committee, has been sporadic some sharing of information, and during the development of some events as IACO Keeping the independent role of each group (OEPA, PCC, and Mectizan Donation Program Committee), OEPA proposes for 1997 to work closely with the Mectizan Donation Program Committee mainly on the following technical areas

1 Unifying formats and procedures for the definition of the magnitude and the extent of the Onchocerciasis Program in each particular country

2 Using standard format for identifying the indicators of the indemicity and treatment (for example Number of localities according to indemicity, number of population at risk, number of population affected, and number of population eligible for treatment)

3 Exchanging all documentary information each other

4 Having at least the participation of one member of OEPA in one of the Mectizan Donation Program Committee meetings

c Expert Committee on Certification of the Elimination

As it was mentioned before, OEPA is planning in 1997 to have at least the opportunity of hiring one short time consultant to deal with the preliminary steps for the creation of an international expert group on the certification of the elimination of onchocerciasis

9 Training Activities

The project reached 30 months at the end of 1996 OEPA is still concerned abut the compromise of orienting activities within the sustainable and cost benefit approach in each of the six endemic countries OEPA has been able to identify national resources with some degree of expertise as well as expert human resources on onchocerciasis However, OEPA staff is very conscious that there still are some technical areas of expertise that show some weakness to sustain activities after the period of life of the project Due to that OEPA will start 1997 to coordinate and support the creation of a special group to deal with the motivation and coordination at national level with the preparation of profiles and proposals for training of technical support staff, specially in the local level in the following areas

To summarize the need for training of basic human resources to guarantee in the next two or three years sustainability of actions, OEPA staff has identified the following areas of training

Technical Area			Countries						Trainer
A		Epidemiology	BRA	COL	ECU	GUA	MEX	VEN	
	1	Technical Method for Entomological Evaluation	X	X		X	X	X	Dr John Ehrenberg
	2	Epidemiological Surveillance (EPI-EVAL)				X		X	Dr John Ehrenberg
	3	Ophthalmology (Technical support staff)	X			X	X	X	Dr John Ehrenberg
	4	Labo Analysis (PCR)			X				
B		HIS / GIS	BRA	COL	ECU	GUA	MEX	VEN	
	1	Data base management		X	X	X	X		Ing Freddy Clark
	2	Data entry techniques			X	X	X	X	Ing Freddy Clark
	3	Linkage of community inventory and GIS	X		X	X	X		Ing Freddy Clark
C		Health Education	BRA	COL	ECU	GUA	MEX	VEN	
	1	Health promoters and community volunteers training	X	X		X		X	LTC- HEd and OEPA Director

10 Especial Events

In order to enhance its managerial process OEPA proposes for 1997 to work on two special events

a The IACO meeting to be held in Colombia with a duration of three days OEPA for tradition and due to the need to join and to have the opportunity of sharing results, has been able to coordinate yearly the Inter American Conference on Onchocerciasis — IACO In 1997 OEPA will continue working on the coordination of such activity

b A managerial workshop for the Directors/Administrators of the National Programs to be held in Guatemala with the support of IDB for a period of three days

The basic themes for IACO are to be defined in consensus with the PCC and National Directors

The themes suggested for the meeting of National Directors in Guatemala are planning, reporting, and evaluation according to the logic framework and the use of indicators of impact according to a training package available at IDB